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THE UNIVERSITY OF ALBERTA

THE FISCAL DEVELOPMENT OF THE CITY OF EDMONTON SINCE 1946

by

MICHAEL CONN HODGSON

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled "The Fiscal Development of the City of Edmonton Since 1946," submitted by Michael Conn Hodgson in partial fulfilment of the requirements for the degree of Master of Arts.

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ABSTRACT

The development of the petroleum resources of Alberta since 1947 has sustained a rapid rate of economic development and population growth in the province. The City of Edmonton, because of its proximity to the new oil fields, experienced exceptionally rapid development and growth of population. Concomitant with this growth, Edmonton experienced a substantial increase in its annual expenditures for municipal government.

This work analyzes the expansion in population, incomes, current and capital expenditures, revenue and debt of the City of Edmonton, and their relationships to each other. Between 1946 and 1963, taxable income per taxpayer increased 130 per cent and the population rose by 164 per cent in Edmonton. During the same period, city revenue and current expenditures per capita increased 228 per cent, capital expenditures per capita 259 per cent, and municipal and school debt per capita 268 per cent.

For the period 1963-1973, the population is expected to increase 41 per cent, while taxable income per taxpayer

is expected to rise by 37 per cent. Current expenditures and revenue per capita are expected to increase by 55 per cent, capital expenditures per capita by 16 per cent and municipal and school debt per capita by 48 per cent over the ten year period.

Modifications of present city policy are also studied, and recommendations are made, the chief being the implementation of a capital budget. The need for a capital budget is exemplified by the projected growth in expenditures from 1964 to 1973. The feasibility of new revenue sources which might be used in the future are also examined.

CHAPTER I

THE GROWTH OF THE CITY

Since the war the civic administrations and other groups within the cities of Canada have become imbued with a sense of consciousness towards growth, and more recently they have become concerned with the redevelopment of the central business districts. In Western Canada, the major cities have prepared, or are preparing, general plans for future city development. This thesis is an analysis of the financial problems and prospects faced by a city with a rapidly expanding population. While the City of Edmonton is the subject of this study, the problems and potential solutions may be applicable to other North American cities in similar situations. A discussion of the population growth, and the reasons for that growth, will occupy the rest of this chapter.

In Chapter II, the growth of current expenditures by the city and the reasons for such growth are discussed. In addition, a projection of current expenditures over the next ten years is made. In Chapter III, a discussion of

the means of financing expenditures covers the various forms of taxation along with an analysis of the growth of the various revenue sources in the past, plus the potential increases that would be required to finance the projected expenditures made in Chapter II. Chapter III concludes with a discussion of three new sources of taxation by which the city may broaden the tax base and/or lower the property tax. Chapter IV is a detailed discussion of the capital expenditures made by the city since the war and reasons for these expenditures. A projection is also made of capital expenditures over the next ten years, and a discussion of a capital budget program to facilitate the provision of such expenditures concludes the chapter. A study of the growth of the municipal debt and the reasons for such growth is discussed in Chapter V.

Chapter VI summarizes the main conclusions of this thesis. The material presented in the first five chapters is consolidated to point up the main arguments. They are as follows: (1) a rapidly growing city with limited tax sources available to meet the growing need for current and capital expenditures will incur debt at a rate exceeding the rate of increase of income; (2) the local government requires additional revenue sources; (3) the city requires a capital budget program to implement the increasing expendi-

tures required in order to facilitate economic development; and, (4) it is desirable that the administrative unit should encompass the entire metropolitan area so as to provide greater equity in the provision of services and levying of taxes.

A. An Historical Perspective

It seems appropriate at this time to review the history of the growth and development of the Edmonton area. The city is located just south of the geographic center of the province of Alberta, but in the north part of the settled area. The city is the capital and largest city of the province and is the eighth largest metropolitan area in Canada. In the last decade of the nineteenth century, a permanent settlement developed on the north bank of the North Saskatchewan River and was later incorporated as the Town of Edmonton in 1892. On the south bank of the river, another settlement developed which was incorporated as the Town of Strathcona in 1899. The Canadian Pacific Railway had come to Strathcona in 1891 and this development had facilitated the increased growth of the settlement. In 1905, when the Province of Alberta was created out of the North West Territories, Edmonton was selected as the capital; the University of Alberta was established three years

later in Strathcona. These two developments were to have considerable effects on the growth of the city. The location of the provincial government in the city created a considerable number of jobs and resulted in large capital expenditures, as did the university. The city became the public administration and educational center of Alberta.

The four western provinces of Canada underwent a period of rapid settlement and economic development between 1900 and 1914, and accompanying this growth was an extraordinary amount of land speculation. Largely with a view towards checking this land boom, municipalities were enabled and encouraged to apply site-value taxation, either in whole or in part. Most of them did so, and Edmonton was no exception, removing all taxes on improvements. The increased taxes thus imposed on land values were insufficient to check the boom in land values. In 1912 when the two towns were combined to form the City of Edmonton, the combined population was 53,600, an increase of 72 per cent over the previous year.[1] Assessed land values in Edmonton increased

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[1] The authenticity of the 1912 civic census is dubious. According to T. Cashman writing in More Edmonton Stories (Edmonton: The Institute of Applied Arts Ltd., 1958), p. 12, the over-zealous census commissioner included a great many non-existent people plus non-residents and travellers in order to boost the importance of the new City of Edmonton.

from approximately $6,000,000 in 1904 to $192,000,000 in 1914. In comparison, the population growth was just as phenomenal as the increase in land values. The population increased from approximately 7,000 in 1903 to 72,500 in 1914. Optimism was rampant and one forecast of the day foresaw Edmonton with a population of 400,000 by 1930, and 1,000,000 by 1945. The Peace River Region was to have had 1,000,000 inhabitants. British capital was rumored to be coming in to establish large industries. Then came the First World War in 1914.

The land boom actually collapsed just before the war, not because of municipal taxation, but because of the general reduction in economic activity. Land values plummeted and the assessed valuation of property in the city was not to exceed the 1914 total until 1962 when the assessed valuation of land reached $196,000,000 in terms of a greatly depreciated dollar.

While assessments fell by 67 per cent between 1913 and 1921, the market value of land fell even further. This is indicated by the fact that over the period 1915 to 1920, only 58.26 per cent of the current tax levy was collected in any one year.[2] Forced tax sales of property on which taxes

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[2] The City of Edmonton, Special Report on Assessment and Taxation (August, 1921), p. 21.

were owing resulted in thousands of lots reverting to the city over the period. Table 1 indicates the extent of the decline in assessed property values. Assessed land values continued to decline until 1940 when they reached a low of $23,000,000. Assessed land values have risen steadily since that time.

TABLE 1

THE CITY OF EDMONTON, 1913-1921,
PROPERTY ASSESSMENT[a]
(in thousands of dollars)

Year	Land	Buildings	Total
1913	$188,539	. . . .	$188,539
1914	191,284	. . . .	191,284
1915	171,362	. . . .	171,362
1916	132,475	. . . .	132,475
1917	100,917	. . . .	100,917
1918	76,833	$15,571	92,405
1919	62,723	16,942	79,666
1920	62,357	17,300	79,658
1921	61,628	18,972	80,600

[a] Source: The City of Edmonton, Special Report on Assessment and Taxation (August, 1921), p. 10.

The city found itself in dire financial straits and under these conditions the provincial government brought pressure to bear on the city and other Alberta municipalities to impose or increase taxes on improvements. As can be seen from Table 1, the city did impose a levy on improve-

ments starting in 1918. However, no reversion to assessing improvements in full has occurred. The city imposed a levy on improvements by assessing them at 60 per cent of "fair actual value" for commercial property, and 50 per cent for single family dwellings. This is a middle-of-the-road position between those who still advocate site-value taxation[3] and those who advocate 100 per cent assessment of all land and improvements.[4]

B. The Edmonton Area

The metropolitan area of Edmonton comprises several urban and rural municipalities which contained 368,000 people in 1963. These municipalities included the City of Edmonton (population 303,756), the Town of Jasper Place (35,478), the New Town of St. Albert (7,150), the Town of Fort Saskatchewan (approximately 5,000), the Town of Leduc (2,750), and portions of the Counties of Sturgeon and Strathcona and the Municipal District of Stony Plain (13,850). The annexation of the Town of Jasper Place by the City of Edmonton on August 17, 1964, brought the city's pop-

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[3] For example, among those who advocated the single tax on land was Henry George, Progress and Poverty (New York: Robert Schalkenbach Foundation, 1929).

[4] See Chapter III, page 55, for a more detailed discussion of property taxation.

ulation up to 350,000. The entire metropolitan area is a cohesive economic, social and cultural unit, but not a political unit. This latter condition may eventually be established so as to provide a more equitable and beneficial tax and expenditure structure for the area.

The data used in this study of the City of Edmonton does not include the Town of Jasper Place. While Jasper Place is now a part of the city, and will affect revenue and expenditures to some degree, time did not permit its inclusion. In consequence of this omission, it will be assumed that the revenue received by the city from Jasper Place will be spent on expenditures in Jasper Place, although it is more likely that expenditures will exceed revenue in that area, and the costs of providing certain services will decline on a per capita basis for the larger city as a whole.

C. The Population Growth of the City

To obtain an adequate perspective of the population growth of the City of Edmonton it is necessary to set that growth against the background of population growth in Canada, Western Canada, and the Province of Alberta.

1. Population Growth in Canada

Since 1921, the population of the Dominion of Canada has increased at an average rate of 1.8 per cent per year. From 9,051,000 people in 1921, the total increase has been 110 per cent to 19,021,000 in 1963. During the Great Depression and the Second World War, however, the population grew more slowly than the long-term average. Since 1946, the rate has been about 2.5 per cent per year due to an increased birth rate and a relatively high rate of immigration.

This rate of increase in population has not been equally distributed amongst the provinces. While the populations of Prince Edward Island and Saskatchewan increased only 20 per cent and 23 per cent, respectively, between 1921 and 1963, the fastest growing provinces of Alberta and British Columbia grew by 140 per cent and 225 per cent, respectively, over the same period.[5] Of special note is the relative position of Saskatchewan. From the third most populous province in 1921, it has fallen to sixth in 1963, while British Columbia has risen from sixth to third place.

The two western-most provinces, Alberta and British Columbia, have grown, as noted, at a faster rate than any of the other provinces. During the decade 1951-1961, Alberta

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[5] Appendix A, Table A-14.

grew 41.8 per cent, while British Columbia increased 39.8 per cent. The reasons for these high rates of growth will be outlined in Section D of this chapter.

2. Population Growth in Alberta

Alberta's population growth has varied considerably over the past fifty years. During the decade 1911-1921 it increased 57.3 per cent, but this was from a relatively small base. From 1931 to 1941, the increase was only 8.8 per cent, due mainly to the depression. Since 1945, the population has increased considerably. From 1911 to 1961, Alberta's population increased from 5.0 per cent of the total Canadian population to 7.3 per cent, while it increased from 21.6 per cent to 27.5 per cent of the total for Western Canada.[6]

One projection of Alberta's population growth indicates a population of 1,765,000 in 1971, or a rate of 32.5 per cent per decade. This projection indicates a population of 22,902,000 in Canada in the same year. If these projections are realized, Alberta will have 7.7 per cent of Canada's population and 28.9 per cent of Western Canada's

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[6] Ibid., Table A-15.

population by 1971.[7]

The cities of Edmonton and Calgary have absorbed an increasing proportion of Alberta's population over the years. Whereas in 1911 the two cities comprised only 20 per cent, or 74,800 persons, of Alberta's 374,000 people, by 1961 their total metropolitan populations of 616,600 comprised 46 per cent of Alberta's population of 1,332,000.[8] With an estimated combined population of 884,000 in 1971 the two cities would have 50 per cent of Alberta's population. The growth of these two cities is exceptional among Canadian and American cities. Since 1946, both cities have grown much faster than any of the other major cities in Canada.[9] From tenth and eleventh in size in 1941, metropolitan Edmonton and Calgary have increased to eighth and ninth in size in 1961. In the decade 1951-1961, Calgary and Edmonton increased in population by 96.1 per cent and 91.0 per cent, respectively, whereas the average increase for the fourteen largest cities in Canada was only 45.3 per cent. The rates of growth of the two cities were so great that Calgary was the fifth, and Edmonton the sixth, fastest growing city in

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[7] E.J. Hanson and I.C. Robison, Downtown Redevelopment Proposals, City of Calgary--Canadian Pacific Railway, 1963, p. 36.

[8] Appendix A, Table A-16.

[9] Ibid., Table A-17.

North America.[10]

3. Population Growth in Edmonton

While Edmonton's metropolitan population had increased to 337,500 by 1961, 83.3 per cent of this population was within the city limits, which is a very high percentage compared to the other major cities in Canada. It is only the city with which we are concerned in this study, although the suburbs have influenced city expenditures and revenues to some extent. The period under study is the seventeen years between 1946 and 1963, and all projections will be concerned with the ten year period from 1963 to 1973 as it affects the City of Edmonton.[11]

From a population of 114,500 in 1946, the City of Edmonton increased 164 per cent to 303,750 in 1963. The average annual increase was approximately 5.9 per cent, or 11,105 persons. The rate of growth fluctuated considerably, however, between 8.58 per cent in 1949 and 2.49 per cent in 1961. The smallest absolute increase was in 1946 when the population rose by 3,565 persons; the largest increase was that of 14,650 in 1956; the 1962 increase of 18,949 was greater, but included approximately 10,000 people from the

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[10] _Ibid._, Table A-18.

[11] Excluding the now amalgamated area of Jasper Place.

annexed Town of Beverly.[12]

Before 1946, the population of the city had not grown at a very high rate. During the depression, incomes were relatively low and people could not afford to have large families. Many people actually left the province in search of a better living standard. During the Second World War, men and women left the city to join the armed forces. In 1946, however, the various stimuli that were to cause the city's rapid rate of growth came to the forefront. With the war over, veterans returned to the city and in their wake came many thousands of immigrants from Europe. The anticipated post-war recession did not materialize in Canada and as incomes increased, the number of "war babies" increased considerably. Another factor was the trend to urbanization within the province. Many of the younger people came to the city from farms, villages and towns seeking higher incomes and greater employment opportunities.

It would undoubtedly appear, however, that the oil and gas boom provided the greatest stimulus for growth. Saskatchewan and Alberta were basically similar in their levels of economic development before 1946, yet Saskatchewan did not have an oil boom until much later than Alberta and consequently was left behind. With the discovery of oil at

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[12] Appendix A, Table A-19.

Leduc in 1947, people associated with the oil, gas and petro-chemical industries descended on Edmonton from all over North America, accompanying the great volume of capital investment[13] that was to help elevate Alberta's per capita income to the third highest in the Dominion.[14] The oil boom continued until the latter half of 1958, and then there was a decline. The slight recession in North America at that time seems to have halted the rapid rate of growth in population, but, in addition, the factors underlying the growth had lost their momentum. The basic factor affecting the growth of population in Edmonton, was the levelling off and decrease in investment in the oil and petro-chemical industries. This caused a levelling off in the growth of income which checked immigration. Furthermore, the baby boom subsided and the low percentage of births prior to 1946 resulted in reduced marriage and birth rates in the last five years.

Since 1958, the population growth of Edmonton, excluding the Town of Beverly, has averaged only 3.08 per cent per year, whereas for the period 1948-1958 the average annual rate was 7.11 per cent.[15] Many of the people moving ostensibly to the city settled in the Town of Jasper Place because

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[13] _Ibid._, Table A-9.

[14] _Ibid._, Table A-1.

[15] _Ibid._, Table A-19.

of the lack of residential housing and land within Edmonton. This factor is reflected in the average annual growth rate of 10.5 per cent that the town has experienced for the past ten years. For the metropolitan area as a whole, the average annual growth rate since 1951 has been 6.4 per cent and since 1958 it has been 5.2 per cent.[16] In conclusion, it would appear that 41 per cent of the population increase in the metropolitan area is occurring outside the city limits. The trend to high-rise apartments is expected to continue as the metropolitan population and traffic increase, thus countering suburban spread to some degree. Partly for this reason the annual growth rate of 3.25 per cent used by the City Planning Department for purposes of population projections within the city is considered to be too low, even though it is higher than the 3.08 per cent average over the past five years. A growth rate of 3.5 per cent per year is favored here, which is the same as the average annual rate of growth of the total population of Alberta since 1951.[17] The trend to urbanization in the city can be expected to increase steadily over the next ten years. Based on a 3.5 per

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[16] Edmonton District Planning Commission, Urban Population Estimates, Edmonton Metropolitan Area, 1960-1980 (September, 1961), p. 6.

[17] Ibid., p. 6.

cent growth rate, the population of the city would increase from 303,756 in 1963 to 360,800 in 1968, and to 428,500 in 1973.[18]

D. The Economic Growth of the City

The future growth of the City of Edmonton depends on the incomes and profits that indigenous and prospective citizens and firms receive, and may expect to receive. The potential growth therefore depends on the competitive position of the local industries in relation to local, regional, national, and international markets. As the city is the administrative center of the public sector in Alberta, the city's growth also depends largely on the growth of the province as a whole, and on the degree of government participation in the economic life of the province. Of great importance will be the university, the hospitals, wholesaling, retailing, transportation, manufacturing, and financial activities. To obtain a greater perspective of the Edmonton economy it is necessary to regard it in relation to the economic potential of Canada within the world economy, of Western Canada within the Canadian economy, and of Alberta within the Western Canada economy.

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[18] Appendix A, Table A-22.

Economic growth in Canada has proceeded at an uneven rate since 1926.[19] This has been due to the nature of the Canadian economy which is dependent on the rate of development of natural resources, such as minerals, forests, rivers and agricultural lands. Since 1926, Canada's gross national product has increased, in real terms, at approximately 4 per cent per year. Of this, population increase accounted for about half, and productivity the other half. In terms of current dollars, the average annual increase was about 6 per cent since the price level increased approximately 2 per cent per year over the period in question. Between 1946 and 1962, gross national product increased 241 per cent from $11,850,000,000 to $40,400,000,000. In constant 1957 dollars, the increase was a more modest 84 per cent, from $20,200,000,000 in 1946 to $37,200,000,000 in 1962.[20]

In the next ten years, the real gross national product will rise at about 4 per cent per year if population and productivity grow at the rate experienced in the last thirty-seven years. At a rate of 4 per cent per year, gross

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[19] Since that year detailed data are available in the form of: Government of Canada, Dominion Bureau of Statistics, National Accounts, Income and Expenditure, (Ottawa: Queen's Printer, Annual Publication).

[20] Appendix A, Table A-3. In per capita constant 1957 dollars, the increase was only 22 per cent, from $1,644 in 1946 to $2,003 in 1962.

national product would rise from $37,400,000,000 in 1961 to $59,900,000,000 in 1973. With an estimated population of 23,000,000 in the latter year, the per capita gross national product would be $2,600 in terms of 1961 dollars. If the rate of growth were 4.5 per cent per year, gross national product would reach $63,400,000,000, or $2,750 per capita in 1973. The Canadian economy seems to be well on its way to reaching the latter level of gross national product. The seemingly favorable long-term market for animal and grain products, oil and gas, forest products and other mining products provide a basis for growth expectations. In terms of current dollars, gross national product increased by 7.96 per cent in 1962. The average growth trend since 1960 has been 7.2 per cent per year and this gain, for the most part, represents real increases in output as price rises have been moderate. While the Canadian wholesale price index rose almost 3 per cent in 1962, and just over 1.5 per cent in 1963, this upward movement seems to have come to a halt and the index for June, 1964 was actually below that of a year earlier.[21] The consumer price index has been rising at just over 1.5 per cent per year.

Increases in total personal income in relation to increases in population have not been proportionally dis-

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[21] Bank of Montreal Business Review, July 31, 1964, p. 1.

tributed amongst the provinces of Canada in the past, and are not likely to be in the future. Between 1946 and 1961, total personal income increased by 220 per cent in British Columbia, 207 per cent in Alberta, 205 per cent in Ontario, and 189 per cent in Canada as a whole.[22] In terms of current dollars per capita, personal income in Alberta rose from $854 in 1946 to $1,582 in 1961, an increase of 85 per cent. In British Columbia, the increase was a more substantial 100 per cent from $898 per capita in 1946 to $1,796 per capita in 1961, while, in Canada as a whole, the increase was 94 per cent from $791 to $1,538.[23]

Wages and salaries accounted for 61.4 per cent of total personal income in Alberta in 1961 compared with only 42.1 per cent in 1946. Over this period, wages and salaries increased 347 per cent to $1,300,000,000; interest, dividends, and net rental income increased 272 per cent to $186,000,000; government transfer payments increased 198 per cent to $247,000,000; net income of unincorporated businesses increased 181 per cent to $194,000,000; and net income of farmers from farm production increased only 9.8 per cent to

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[22] Appendix A, Table A-1.

[23] Ibid., Table A-4. In terms of constant 1957 dollars, these increases were a modest 8.8 per cent for Alberta, 18.3 per cent for British Columbia, and 14 per cent for Canada. See Table A-3.

$208,000,000.[24] These figures indicate the trend to more and more urban employment in the province, and the trend away from agriculture which has been relatively static for the whole of the period.

Most of the increase in wages and salaries occurred between 1945 and 1953, with the fifteen year annual average between 1946 and 1961 being 11.1 per cent per year. Net income of unincorporated businesses grew at an average rate of 7.9 per cent, while interest, dividend and net rental income grew at 9.8 per cent per annum, and government transfer payments grew 9.0 per cent.[25] Farm incomes fluctuated considerably from annual increases as high as 110.6 per cent to decreases of up to 36.6 per cent. Farm income was 24 per cent less in 1961 than it was in 1956 which helps to account for personal income per capita in 1956 being greater than in 1961--in terms of constant dollars.[26]

Hanson and Robison have made projections of personal income for 1971 and 1981.[27] In their medium projection, total personal income will increase from $2,107,000,000 in 1961, or 7.51 per cent of the total for all of Canada, to

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[24] _Ibid._, Table A-5.

[25] _Ibid._, Table A-6.

[26] _Ibid._, Table A-2.

[27] Hanson and Robison, _op.cit._

$3,304,000,000 or 7.90 per cent of Canada, by 1971, and to $5,167,000,000, or 8.3 per cent of Canada, by 1981, in terms of current dollars. Per capita personal income is expected to increase by 18.0 per cent per decade to $1,759 in 1971 and $2,076 in 1981, in terms of constant 1957 dollars.[28]

The average weekly wage in manufacturing in Alberta increased by 61 per cent between 1951 and 1961. This increase was greater than in any of the other western provinces or for Canada as a whole. However, the increase to $77.89 was from a lower base than British Columbia's weekly wage, which rose to $84.17. The average weekly manufacturing wage in Edmonton increased by 65 per cent to $78.35 over the same period, an increase that was greater than the increases in Calgary and in the four major cities in Canada. It is exceeded by those of Calgary ($80.12) and Vancouver ($81.30) in absolute level.[29]

One of the reasons for Alberta's high rate of growth in incomes and output has been the high level of capital investment that took place in the province. Alberta had the highest per capita investment in Western Canada in every

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[28] Appendix A, Table A-7.

[29] Ibid., Table A-9. In terms of constant 1961 dollars, the average weekly wage in manufacturing increased by a modest 34 per cent in Edmonton, while for Alberta it increased 30 per cent.

year between 1952 and 1962, except for 1957, when British Columbia exceeded Alberta. Over the eleven year period, Alberta's per capita investment averaged $899 per year. This exceeded British Columbia's yearly average of $764 per capita by 17.6 per cent, Saskatchewan's $640 by 40.5 per cent, Canada's $598 by 50.3 per cent, and Manitoba's $586 by 53.4 per cent.[30]

The high private and public investment in Alberta was due to the large capital needs of the petroleum industry, the petro-chemical industry, public highways and utilities. It is extremely difficult to forecast the future growth of the petro-chemical industry in Alberta because of its dependence upon world market conditions. A gradual increase in investment and production is likely as the demand for oil and gas increases in North America. If the Middle East and/or Venezuelan oil supplies were to be lost to European and North American consumers, the demand for Alberta oil would increase substantially. Growth will also depend upon technological changes and government policies. The market for natural gas as a clean, safe, heating fuel will continue to grow in response to the rising North American demand. The initial development of the largest oil reservoir in Canada--the Athabasca Tar Sands--has not even

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[30] Ibid., Table A-9.

begun to tap the potential output.

There is also a potential for growth in the forest products industry in Alberta, although competition with the industry in British Columbia will be difficult. The meat-packing industry has great possibilities also, but it is becoming more automated and will not likely provide greatly increased employment opportunities, except in transportation and distribution.

Investment data, wages, labor force data, and population growth do not indicate all of the growth in Alberta and in the City of Edmonton. Income tax data reveal even more about the growth of Edmonton. In 1946, the city had 37,523 income taxpayers averaging an income of $1,938 per taxable return, and a total income of $72,700,000. In 1962, the year for which the latest data is available, the city had 204 per cent more taxpayers; they had an average income of $4,453, or 130 per cent higher than 1946, and these 114,077 taxpayers had a total income of $508,000,000. Average income per taxable return did not increase at a steady rate over the period; it fluctuated from year to year--mostly increasing, but sometimes decreasing--depending on the state of the economy.[31]

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[31] Ibid., Table A-20. In terms of constant 1961 dollars, the average income per taxable return only increased 23.7 per cent from $3,527 to $4,364.

An analysis of the number and distribution of taxable returns for Edmonton, Calgary, Alberta and Canada for 1960, 1961 and 1962, brings further facts to light. The reader should turn to Tables A-10, A-11 and A-12 in Appendix A for detailed data. It should be noted that while both Edmonton and Calgary had increasing percentages of the number of taxable returns in relation to both Alberta and Canada, in relation to Canada, Alberta is not increasing. This reflects the continued urbanization of the province and the lower incomes of rural taxpayers.

The same trend exists for total income assessed, taxable income, and tax payable, except that the Alberta percentages increased in relation to Canada. This indicates that incomes in Alberta, and even more so in the two cities, are increasing at a faster rate than they are in Canada as a whole.

The expected growth of income in the Edmonton area from 1963 to 1973 appears favorable at the present time. The continued demand for the exports of the Edmonton region, such as bakery products, butter and cheese, meat-packing, concrete products, furniture, sash, door, and planing mill products, chemicals, oil and gas will augment incomes as will the increasing size of the provincial government, the

university, and private enterprises.[32] With an estimated population of 428,500 in 1973 it is expected that total taxable income will reach $1,071,250,000 or 109 per cent greater than in 1962.[33]

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[32] See: The City of Edmonton, Draft General Plan For The City Of Edmonton, Part III, Chapter VII, p. 158.

[33] Appendix A, Table A-22.

CHAPTER II

CURRENT EXPENDITURES

Current expenditures by a municipal government provide the necessary services which enable the citizens to pursue economic, social, and cultural activities. These services are for protection, recreation, sanitation, health and welfare, education, and general government.

These activities have been undertaken because the benefits are social or community in nature; that is, they accrue in part or entirely to the members of the community as a group rather than as individuals. These activities are not readily divisible into units which can be sold at a price. Therefore, the local government renders the services as expressed by the local voters if the total gains to the community from the services exceed those which accrue directly and separately to individuals.

Such activities as protection to persons and property yield large social benefits. Without them the operation of the modern complex economic system would be impossible, but these services cannot be produced by private

enterprise.

> Private enterprise can realize gain only from those benefits which accrue directly to individuals, since purchases of the services will be influenced solely by the direct benefits received as a result of the purchase. Because there is no way to prevent all persons from receiving the benefits if the services are provided, a voluntary "subscription" basis of financing is not feasible. Accordingly, if the activities are to be carried on, governments must provide them.[1]

Closely related to these services is a group of activities which do provide some direct benefit to individuals but which also convey additional benefits to the community taken as a whole. Such a service is education. Private enterprise can and does produce and sell educational services, but there are substantial gains to the community from the provision of at least a minimum level of education to all persons. These gains include greater skill and thus larger potential output which facilitates economic development. A more discerning electorate and greater political stability are likely to be provided by an educated citizenry.

A local government may also be involved in activities which do not result in the production of a service except administratively. There are two classes of such activities. Firstly, there are welfare activities which are undertaken for the purpose of increasing the economic well-

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[1] John F. Due, Government Finance (Rev. ed.; Homewood, Illinois: Richard D. Irwin, Inc., 1959), p. 13.

being of some groups by providing monetary payments financed by the taxpayer as a whole. Secondly, there are interest payments on the municipal debt which are classified as transfer payments since the payments do not arise from current productive activity.

Between 1946 and 1963, total current expenditures of the city increased from $6,100,000 to $52,400,000. In per capita current dollar terms, expenditures have risen from $52.63 in 1946 to $172.52 in 1963, an increase of 228 per cent. Between 1946 and 1951, per capita current expenditures actually decreased in terms of constant dollars because of declining debt charges, but since then expenditures have risen.[2] The following is an analysis of major current expenditure categories.

A. Administration and General Government

Included in this category of current expenditures are the outlays of various departments such as the assessors, building inspectors, city clerk, city planning, civil defence, commissioners, engineering, finance, legal, and personnel. Included also are miscellaneous expenditures that

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[2] Appendix B, Tables B-1, B-3, and B-4. In terms of constant 1961 dollars, the increase was only 70 per cent from $95.79 per capita in 1946 to $162.45 in 1963.

it is not feasible to include under any other subheading.

Current expenditures on general government increased from $571,000 in 1946 to $3,900,000 in 1963. In per capita current dollars, the increase was a more modest 158 per cent from $4.97 in 1946 to $12.84 in 1963.[3] As a percentage of total current expenditures, current expenditures on general government have declined from 9.44 per cent in 1946 to 7.44 per cent in 1963. In 1956, general government accounted for only 5.46 per cent of total current expenditures.[4]

Between 1946 and 1959, per capita current expenditures in this category remained fairly stable in terms of constant dollars, indicating that price level increases were to some extent responsible for rising per capita expenditures in terms of current dollars over that period. There were other factors. Many of the activities within this category do not expand as rapidly as does the population. There were still only one mayor and ten aldermen during this period, and the legal department, the commissioners, and personnel expanded to a very limited degree. Increases in expenditures were spread over a rapidly growing population. Since 1959, total expenditures have increased sharply. This

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[3] *Ibid.*, Tables B-1 and B-3. In terms of constant 1961 dollars, the increase was only 36 per cent from $9.05 per capita to $12.33 per capita. See Table B-4.

[4] *Ibid.*, Table B-2.

was due, in part, to the necessity of bringing wages of civic employees into line with comparable employment in the private sector of the local economy. More emphasis was placed on city planning. The new assessment manual brought out by the provincial government meant an expansion of the assessors' department. Civil defence became a higher priority activity. The greatly increased staff required a larger, more complex personnel department. The staffs of the engineering department and the building inspectors department increased substantially so as to provide the staff necessary to develop new subdivisions, and to inspect for illegal suites which the city council was attempting to eliminate.

There were, therefore, two opposing forces affecting per capita expenditures on administration and general government. Diseconomies of scale resulting from the expanding population were partially offset by economies resulting from the increased complexities of the larger city. These two forces are expected to work against each other in the future as well.

In order to determine the possible expansion of expenditures in administration and general government over the next ten years, a projection was made of the trend of the past ten years. The period 1953 to 1963 was one of rela-

tively stable prices and there were no wars or major recessions. Projections of current expenditures in this chapter are made on the basis of per capita current expenditures in terms of current dollars. It is assumed that the price level will increase by 2.0 per cent per year, as it did between 1953 and 1963. Because of this the expenditures projected must not be thought of as representing 1963 dollars. It must be emphasized that these projections do not indicate what will in fact happen; they indicate only that current expenditures per capita would reach the level indicated _if_ the trend of the past ten years were to continue for the next ten years. On this basis, current expenditures on administration and general government would rise by 46 per cent from $12.84 in 1963 to $18.80 per capita in 1973. If the projected population of 428,500 in 1973 were actually realized, total current expenditures on administration and general government would total $8,056,000, an increase of 107 per cent over the 1963 total. The 1973 total would represent 7.03 per cent of projected total current expenditures in that year, whereas in 1963 administration and general government accounted for 7.44 per cent of the total.[5] The increase in total expenditures on this category rose by 203 per cent between 1953 and 1963.

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[5] _Ibid._, Table B-5.

B. Protection to Persons and Property

Included in the category of protection are fire and police protection, the animal pound, protection inspection, traffic control, street lighting, and weed and insect control. This is the third largest category of current expenditures because of the large labor expenses of the fire and police departments. On the average, 17.5 per cent of total current expenditures is absorbed by protection. In 1963 this amounted to $8,987,000 or $29.59 per capita, as compared with a per capita figure of $6.84 in 1946.[6]

There has been a fairly constant increase in per capita expenditures on protection since 1946 and this increase, even in constant dollar terms, is expected to continue as the city grows. Labor costs will likely rise more than the price level; as the population and automobiles per capita increase, traffic control will become increasingly more complex; but urban renewal and redevelopment, if undertaken, could decrease police and fire protection expenses if the experience of some American cities is any guide.[7] The need for urban renewal is not a top priority item at the present time be-

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[6] *Ibid.*, Tables B-1, B-2, and B-3. In terms of constant 1961 dollars per capita, the increase was only 128 per cent from $12.45 in 1946 to $28.41 in 1963. See Table B-4.

[7] The City of Edmonton, *Urban Renewal Study for the City of Edmonton*, 1963.

cause of the youthfulness of the city, but consideration should definitely be given to renewal programs before the problem becomes greater.

Current expenditures per capita on protection have been projected on the same basis as that used for the projection of current expenditures on general government. This projection indicates a per capita expenditure of $46.23 in 1973 which is 56 per cent greater than the figure for 1963. On this basis, protection expenditures would increase by 120 per cent to a total of $19,810,000 in 1973 or 17.28 per cent of total current expenditures. This would be a decline from 17.42 per cent of total current expenditures in 1963.[8] In the past ten years total expenditures on this category rose 173 per cent.

C. Public Welfare

Contained in this category are current expenditures on children's aid, civic welfare cases, and sundry grants. Total expenditures in this category have risen steadily in amount from $316,000 in 1946 to $4,546,000 in 1963. In per capita current dollars, the increase was from $2.75 in 1946 to $14.97 in 1963. As a percentage of total current expenditures, public welfare accounted for only 8.67 per cent in

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[8] *Appendix B*, Table B-5.

1963; this is up from 1946 when it accounted for 5.22 per cent of the total.[9] The reasons for the increase in expenditures on this category are that the city is taking more responsibility for the welfare of others and, with the increased size of the city, there tends to be more welfare cases. The city has also tended to increase the size of its grants to community organizations. Another reason for increased expenditures on public welfare has been minor recessions which have put those people in the lower income groups temporarily out of work.

In the future, increased expenditures on this category will depend on the level of income of the citizens and unemployment rates. One major factor will be whether or not the provincial welfare department assumes all responsibility for public welfare in the province. This is one example of the cases where civic expenditures may be eliminated by having the provincial government, with its greater revenue sources, provide the entire service. All that would remain in this category would be sundry grants donated by the city to various organizations.

It is assumed here that the city will continue to provide the service. Assuming the trend of 1953-1963,

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[9] Ibid., Tables B-1, B-2, and B-3. In terms of 1961 constant dollars, the increase in per capita expenditures was 187 per cent from \$5.01 to \$14.37. See Table B-4.

projected current expenditures on public welfare would increase by 57 per cent to $23.49 per capita in 1973. This would amount to $10,065,000 in 1973 or 8.78 per cent of total current expenditures in that year. This would mean an increase of 121 per cent in the total spent on public welfare.[10] The increase over the past ten years was 256 per cent.

D. Recreation and Community Services

The main expenditures in this category are for parks and library services. Recreation and community services expenditures have increased from 4.95 per cent of total current expenditures in 1946 to 5.45 per cent in 1963. In total, the increase has been from $299,000 in 1946 to $2,854,000 in 1963. In per capita current dollar terms, the increase amounts to 262 per cent from $2.60 in 1946 to $9.40 in 1963.[11] This increase has been the result of the city's policy of developing the large areas of park land within the river valley.

Recreation developments, such as Mayfair Park and

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[10] Ibid., Table B-5.

[11] Ibid., Tables B-1, B-2, and B-3. In terms of constant 1961 dollars, the increase in per capita expenditures was 95 per cent from $4.73 in 1946 to $9.20 in 1963. See Table B-4.

the Storyland Valley Zoo, will cause current expenditures on this category to rise in the future, but if the past trend continues recreation and community services will decline to about 5.12 per cent of total current expenditures in 1973. The projection made here indicates that per capita expenditures may increase by only 39 per cent to $13.71 in 1973.[12] In total, this would mean an increase of 106 per cent in expenditures over 1963. In the last ten years, current expenditures on recreation and community services increased 168 per cent.

E. Sanitation and Garbage Removal

Included in this category are current expenditures on the collection of garbage, the maintenance of sewers and disposal plants, and street cleaning. As a percentage of total current expenditures, sanitation has declined from 6.31 per cent in 1946 to 4.53 per cent in 1963. Total expenditures increased from $382,000 in 1946 to $2,373,000 in 1963. In terms of per capita current expenditures, the increase has been 135 per cent from $3.32 in 1946 to $7.81 in 1963.[13]

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[12] Ibid., Table B-5.

[13] Ibid., Tables B-1, B-2, and B-3. In terms of constant 1961 dollars, the increase was 24 per cent from $6.04 in 1946 to $7.50 in 1963. See Table B-4.

As the city expands, the costs of waste removal will tend to increase because of the greater area to be covered, increased waste per capita, greater hauling distances to disposal plants, and labor costs. Cost savings, however, may be achieved if the trend to high rise apartments continues, and if mobile disposal trucks prove economically feasible. Sewer maintenance expenditures will depend on past capital outlays on sewers as regards the quality of the improvement and its capacity. Street cleaning depends on the weather to a very great extent and costs will vary in relation to the severity of the winters and the total mileage of main roads within the city. A projection of sanitation expenditures based on the past ten years indicates an increase in per capita expenditures of only 7 per cent over the next ten years. This would amount to a total expenditure of $3,578,000 in 1973 which would be an increase of 51 per cent over 1963. Between 1953 and 1963, total expenditures on sanitation increased by 55 per cent. On the basis of this projection, current expenditures on sanitation would decline to 3.12 per cent of total current expenditures in 1973.[14]

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[14] *Ibid.*, Table B-5.

F. Conservation of Health

Besides expenditures on public health, this category also includes the school dental program. This is the smallest category, amounting to only 1.13 per cent of total current expenditures. This expenditure category amounted to $52,000 in 1946, and increased to $592,000 in 1963. In per capita terms, the increase was from $0.45 in 1946 to $1.95 in 1963.[15]

On the basis of my assumptions for projections of current expenditures, this category of health would remain fairly constant at 1.1 per cent of total current expenditures. The projection indicates that, in terms of constant dollars, expenditures will rise by 44 per cent to $2.93 per capita in 1973. This would amount to an increase of 112 per cent in total expenditures to $1,256,000 in 1973. In the past ten years, current expenditures on conservation of health have risen 172 per cent.[16]

G. Public Works Construction

This category includes current expenditures on

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[15] *Ibid.*, Tables B-1, B-2, and B-3. In terms of constant 1961 dollars per capita, the percentage increase was 128 per cent from $0.82 to $1.87. See Table B-4.

[16] *Ibid.*, Table B-5.

street maintenance, snow removal, plant and equipment maintenance and repair shops. In 1946, public works accounted for 8.08 per cent of total current expenditures. It has declined in importance over the years to 2.97 per cent in 1963. In total, there has been an increase of only 218 per cent from $489,000 in 1946 to $1,556,000 in 1963. This amounts to an increase, in terms of current dollars, of only 20 per cent from $4.25 per capita in 1946 to $5.12 per capita in 1963.[17] Current expenditures on public works fluctuate to a greater degree than does any other category because many of the expenditures depend on the severity of the winters. The more severe the winter the greater is the amount of snow that must be removed and the greater is the damage to the streets.

Expenditures on public works will increase in response to population growth and the demand for better services. A projection of the trend over the past ten years indicates that expenditures on public works will decline to about 2.13 per cent of total current expenditures. This would mean a per capita expenditure of $5.70, and a total current expenditure 57 per cent higher at $2,442,000 in

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[17] _Ibid._, Tables B-1, B-2, and B-3. In terms of constant 1961 dollars per capita, expenditures on public works actually decreased by 36 per cent from $7.74 in 1946 to $4.92 in 1963. See Table B-4.

1973. Between 1953 and 1963, current expenditures on public works increased by only 40 per cent.[18]

H. Education

Included in this category are all current expenditures made by the Edmonton Public School Board No. 7 and the Edmonton Roman Catholic Separate School Board No. 7. These expenditures are grouped into three major categories. Of prime importance is the levy placed on the "equalized" assessment of the city for purposes of the Provincial School Foundation Act. In 1963, the city was required to levy a tax of 32 mills on the equalized assessment of $399,597,541 in order to fulfill the provincial requisition of $12,787,121. Because the net taxable assessment in the city was $568,360,570 in 1963, a mill rate of only 22.5 was required to raise the requisition. Were it not for the other two categories of expenditure, this sum would be all that was spent on education. Because all of the funds paid to the province under the foundation program do not go to the two Edmonton school boards, these boards each levy supplementary school requisitions. The actual mill rate for all school purposes was 30.19 mills in 1963. In 1964, the mill

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[18] _Ibid._, Table B-5.

rate was lowered to 26 mills on a revised equalized assessment of $542,513,232. This levy will contribute $14,105,344 to the school foundation fund.[19]

Education expenditures are by far the largest category of current expenditures, ranging from a low of 26.82 per cent (1955) to a high of 35.27 per cent (1950) of total current expenditures. In 1963, this category accounted for 31.65 per cent of total current expenditures, or $16,587,000. In terms of current dollars per capita, the increase has been 223 per cent from $16.93 in 1946 to $54.61 in 1963.[20] From 1946 to 1956, per capita education expenditures remained fairly constant. Since 1956, however, per capita expenditures have risen considerably as a result of the increased rate of enrollment, students remaining in school longer, and large increases in teachers' salaries.

Most certainly, education expenditures in Edmonton will increase substantially in the future. People born in the post-war baby boom are now approaching marriagable age. Births should increase substantially in the next five years

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[19] The City of Edmonton, Financial Statements and Reports, 1963, pp. 35 and 62.

[20] Appendix B, Table B-1, B-2, and B-3. In terms of constant 1961 dollars, the increase in education expenditures has been 70 per cent from $30.81 in 1946 to $52.43 in 1963. See Table B-4.

and the five years after that will see a great increase in the school population. Besides the higher proportion of the population in the school-age bracket indicated by demographic studies, students will be required to stay in school longer in order eventually to adjust to our complex society. Teachers' salaries will have to increase considerably in order to obtain the number of qualified personnel required to instruct the greater number of students in more diversified subjects. One projection indicates an increase of 40 per cent in student enrolment in Alberta between 1961 and 1971, and 30 per cent between 1971 and 1981.[21]

On the basis of the growth trend in education expenditures over the past ten years, per capita expenditures would reach $87.08 in 1973. This would be an increase of 59 per cent over 1963. On the basis of a population of 428,500 this would entail a total expenditure of $37,314,000. This would be an increase of 125 per cent over the total for 1963. The increase in total current expenditures over the past ten years was 178 per cent. On the basis of the projection of total current expenditures, education expenditures would rise slightly to 32.54 per cent of

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[21] Canadian School Trustees Association, Submission to the Royal Commission on Taxation, October 17, 1963, Table D-2, p. 59.

the total.[22]

I. Debt Charges

This category includes the interest payable and the repayment of principal on debenture debt incurred by the City of Edmonton. The municipal debt will not be discussed at this time because Chapter V covers the debt in detail. Current expenditures on debt charges declined to a low of 13.17 per cent of total current expenditures in 1950. Prior to this time, little new debt had been incurred. Since 1950, however, debt charges have increased to 21.01 per cent of total current expenditures; they reached $11,009,000 in 1963 as compared with $1,205,000 in 1946. In current dollars, debt charges rose 246 per cent, from $10.48 per capita in 1946 to $36.24 per capita in 1963.[23] The debt charges category rose substantially after the war because of the necessity for increasingly heavy borrowing required to supply more and better capital improvements not only for the rapidly increasing population, but also for the construction of needed improvements foregone in the preceding fifteen years.

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[22] Appendix B, Table B-5.

[23] Ibid., Tables B-1, B-2, and B-3. In terms of constant 1961 dollars the increase in per capita debt charges was 82 per cent, from $19.07 in 1946 to $34.79 in 1963. See Table B-4.

While it is not expected that the population will increase at the rate it has in the last seventeen years, the debt charges category is expected to continue to increase if the past financing policy for capital improvements is maintained. In Chapter V, the municipal debt is discussed in greater detail and the increased capital expenditures for freeways, bridges, and utility expansion projected in Chapter IV indicate no lessening of the per capita debt charge burden.

On the basis of past growth of debt charge expenditures, the projected per capita debt charge would be $61.30 in 1973. This would be 69 per cent higher than the 1963 figure. The total of debt charges would then be about $26,267,000, which is 139 per cent higher than the total for 1963. As a percentage of the projected total current expenditures, the debt charges category would increase slightly to 22.91 per cent in 1973.[24] Between 1954 and 1963, this category increased 235 per cent.

J. A Projection of Total Current Expenditures

On the basis of the individual projections made in the above sections, a per capita current expenditure of

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[24] *Ibid.*, Table B-5.

$267.59 in 1973 is indicated. This would be an increase of 55 per cent over the 1963 amount, whereas the 1963 amount was 79 per cent greater than the 1953 amount. The smaller increase is expected because of the lower rate of population growth. In terms of total expenditure, the projection indicates a figure of $114,662,000 in 1973 which is 119 per cent greater than the 1963 value, which in turn was 175 per cent greater than the 1953 total.[25]

It must again be emphasized that these expenditure figures are the result of projecting the growth trends of the ten year period between 1953 and 1963, and that a price level increase of 2.0 per cent per year is assumed. The projected per capita expenditures are independent of the population growth, the latter being a separate projection. If population grows at a slower or faster rate, the total current expenditures will most likely decrease or increase. These projected expenditures will likely be necessary if the city is to maintain the level of services that it provided in 1963.

In the following chapter, the revenue sources of the city are discussed. Their relation to the growth of income and wealth may help to dispel any fears of impending fiscal disaster in the future.

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[25] Ibid., Table B-5.

CHAPTER III

MUNICIPAL REVENUE SOURCES

Metropolitan areas generally have an adequate economic base to support the financial needs of local government, but the fiscal capacities of their governments are more limited. The fiscal limitations arise from two main factors. First, powers granted by the province in relation to tax sources, tax rates and borrowing powers to raise the funds within the capacity of the local economy may be restrictive in nature. Second, there may be fragmentation of the economic unit of the metropolitan areas into many local governments so that (a) an overall capacity adequate to meet needs is poorly distributed between different jurisdictions and different functions, and (b) competition, rather than cooperation, for tax base and revenue occurs between the different units.

A. Assessment and Taxation

The taxable capacity of an area is the ability and willingness of its residents to pay taxes and other charges

to support governmental activities. It depends on both objective and subjective factors. The economic capacity of an area to finance government services depends on the objective factors, such as the income and wealth of the people and businesses in the area. It also depends upon the competitive position of the local businesses in the regional and wider markets, and on the impact of local taxes and expenditures on this competitive position. This capacity can be measured by personal and corporate income, taxable property, sales, value added, inheritances and other possible bases for taxation.

Taxable capacity is based on economic capacity, modified to recognize the revenue sources legally available to local governments, and on the subjective factors. The latter include the political support for the local government, the popularity of the various governmental programs relative to their cost, the customary level of taxes and other government charges--both historically and compared with other nearby jurisdictions--and the attitude of the people, businessmen and community leaders toward government services and tax rates. The type of community--such as urban or rural, primarily industrial or residential, or varying combinations of industrial, commercial and residential, stable or rapid population growth, rich or poor, many or few children--

affects the governmental services needed and indirectly the willingness of the citizens to pay the costs.

The taxes used also affect the taxable capacity and so does the administration of these taxes. A poor tax badly administered would approach the limit at a relatively small revenue yield. Taxes that are equitable and convenient, and that have minimum adverse economic effects, have a large potential capacity. If revenue needs are large, the best tax might be exploited beyond its capacity. Taxable capacity tends to be increased by a variety of taxes, tapping different bases without excessively high average and/or marginal rates. The capacity of any tax and of the entire tax system depends also upon the administration of the tax and on the taxpayer's confidence in the justice and efficiency of the tax.

The maximum tax levies which are politically feasible depend in part on custom, competition, and how these levies change over time. The political limit on the yield from the property tax, still the basic source of local revenue, varies between areas with different access to other large revenue sources (for example, a local income tax) as well as with the economic base, the local leadership, and the level and scope of services expected by the local voters. Too often in discussing taxable capacity, the effects of government expendi-

tures are ignored. Another measure to use would be budget or fiscal capacity, wherein the governmental expenditures are included along with tax capacity to determine the total effect of government on the local area.

The potential tax base changes with the amount and form of economic activity in the area served by a government. The government services provided will increase this economic activity; capital improvements, for example, will enhance land values. Local governments throughout the country still rely on the property tax for about half of all their revenues and for about 70 per cent of revenues from their own sources, that is, excluding intergovernmental payments.

As a matter of municipal policy, the revenue of the City of Edmonton has risen at the same rate as current expenditures. The rapid expansion of the city since the war has necessitated ever increasing taxation--either direct or indirect--in order to cover these current expenditures. This has been the case in all Canadian cities. From 1946 to 1963, the total revenue of the city increased from $6,051,000 to $52,404,000. In current dollars per capita, the increase was 228 per cent from $52.63 to $172.52.[1]

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[1] Appendix C, Tables C-1 and C-3. In terms of constant 1961 dollars per capita, the increase was a more modest 73 per cent from $95.79 to $165.62. See Table C-4.

Although revenue has increased, Table C-4 indicates that in constant dollars, per capita revenue declined slightly between 1946 and 1952, and in 1953 it began to rise.[2] Between 1953 and 1956, revenue increased very little, but since then it has risen at a rapid rate.

Table A-20[3] shows, however, that as a percentage of taxable income municipal taxation declined from 7.26 per cent in 1946 to 5.3 per cent in 1953.[4] Since 1954, per capita taxes have risen to the present 7.63 per cent of income. This indicates that local taxation in the city is not excessive as a percentage of income, but people have been more conscious of the increase in taxation than of the increase in per capita income of 200 per cent. It should also be remembered that the value of property within the city has increased substantially during the post-war period--even in terms of constant dollars. Since federal and provincial taxes have increased substantially over the same period, the total tax burden, relative to income on any given individual is higher than it was in 1946.

In the next ten years, it is expected that per capita

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[2] Ibid.

[3] Appendix A.

[4] Supra, pp. 21-22. Taxable income is estimated to be approximately two-thirds of total personal income.

revenue of the city could increase by approximately 55 per cent, to $267.59 in 1973. This will be necessary in order to cover the projected current expenditures outlined in the previous chapter. It is also expected, however, that per capita personal income will show great increases. As we learn more and more to control the growth of the economy and to initiate means of stimulating depressed areas, as the world market expands for the oil, gas, meat and wheat which are Alberta's prime exports, Edmonton's per capita income will continue to rise. For the last two years the Canadian economy has been very strong and the large wheat sales to the Communist countries have stimulated the economy of Western Canada in high degree. It is estimated that per capita income could increase by approximately 37 per cent in the next ten years. If this occurs, and the increased taxation occurs, local taxation will rise to approximately 8.60 per cent of income.

In the following sections, a detailed examination of the major revenue categories will assist in determining the prospects of covering current expenditures in the next ten years.

1. The Property Tax

The general assessment roll in Edmonton is compiled

each autumn, after which notices are sent out. A Court of Revision sits and hears appeals against assessments, and appeals can be made to the Assessment Appeal Board of the province. After the roll is confirmed, the amount to be raised by the mill rate is struck. Tax notices are sent out in the spring. An exception to the general assessment rate is agricultural land within the city.

Land is assessed at 100 per cent of "fair actual value". Fair actual value is defined as 75 per cent of 1957 market value. Single family dwellings are assessed at 50 per cent of fair actual value, with all other buildings and improvements at 60 per cent. The base year is now 1962, when the provincial assessment standards were adopted. Under these standards, market value determined the level of assessment. It was found in some cases that taxes on residential property in the downtown area were increased considerably. It was deemed that hardship resulted to the owners of such property, and the end result was an amendment to "The City Act" and to the city bylaw. Prior to the amendment, the latter had based market value on the then existing zone used. The amendment stated:

> Notwithstanding anything in this Act, where an action taken pursuant to The Town and Rural Planning Act or The Planning Act has the effect of prescribing (a) for land used for residential purposes, or (b) for a

> parcel of land used for agricultural purposes, some use other than its actual use, the assessor shall, until such time as the land is used for the purpose designated assess the land according to its residential or agricultural use, as the case may be.[5]

This amendment was instituted because in some cases there was a valid complaint of hardship. This occurred because of zoning not geared to the supply and demand for the type of land in question, or through spot development resulting from interim development control that had not taken all factors into account.

Because hardships are imposed in certain cases, some method of back-taxing could be employed. Under this method of taxation, two assessments are made on a piece of property; one assessment on existing use, the other on zoned market-value use. When the property is sold for the purpose for which it is zoned, the previous owner, who now has the funds, pays the city taxes on the basis of the higher assessment, after allowing credit for taxes already paid. The period of back-taxing could be from two to ten years.[6] In this way the city could receive benefit from community-created land values. Speculation is permitted to persist under the

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[5] Alberta, Revised Statutes (1955), Chapter 42, Section 458 (9), as amended 1964.

[6] This method is being initiated in California, where the property is back-taxed for seven years.

amendment. This has tended to maintain costly blighted conditions in many areas of the city. As speculators hold out for exorbitant prices, the price of land is forced upward to the detriment of orderly development.

In addition to the general mill rate for municipal and school purposes there are special property taxes levied, known as local improvement levies. These are special frontage taxes, sewer maintenance levies, water maintenance levies, prism lights, marquees and overpass levies, spur track, underground wiring and subdivision charges, sewer and water service installations, and weed control charges.

a) Exemptions from the Property Tax

An analysis of the 1963 assessment roll shows \$160,000,000 worth of exempt property.[7] Included in this category are: (1) every right, title and interest of the Crown in any property whatsoever; (2) the property used by a religious body; (3) school property; (4) the property of the University of Alberta; (5) hospital property; (6) property owned by municipal districts; (7) the property of any children's aid society; (8) property of agricultural societies; and (9) library boards. All personal property and undeveloped minerals are also exempt from taxation.

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[7] Appendix C, Table C-5.

While the senior governments do make grants in-lieu-of-taxes on their property within the city, it would seem more equitable if these grants were equal to what the tax levy would be if this property were subject to the property tax. The following tables indicate the value of governmental property, the size of the grants and the comparative tax levy.

Table 2 indicates the inadequacy of the contribution of the Government of Alberta in relation to a comparable tax levy. Up until 1962 the provincial grant in-lieu-of-taxes was negligible. Considering the financial condition of the provincial government over the previous years in which large surpluses of revenue prevailed, the paucity of the grant is inequitable. While the debt of the provincial government turned into a large surplus, the municipal debt of Edmonton and Calgary rose inexorably. In effect, the provincial government received the bulk of the financial rewards of economic growth, while the municipal governments received the bulk of the burden of providing the necessary social services. Beginning in 1962, the provincial government made a major change in policy by increasing the size of the grant from 1.71 per cent of comparable tax levy to 43.17 per cent. While this change increased the size of the contribution considerably, the amount has not approached an equitable

TABLE 2

PROVINCIAL ASSESSMENT STATISTICS
1959-1963[a]
(in thousands of dollars)

Year	Provincial Government Property Assessment	Provincial Grant in-lieu-of-Taxes	Comparative Tax Levy	Grant as a Percentage of Tax Levy
1959	$21,381	$ 27	$1,304	2.07
1960	24,348	31	1,534	2.02
1961	27,047	31	1,812	1.71
1962	45,004	923	2,138	43.17
1963	45,209	962	2,147	44.81

[a]Source: The City of Edmonton, Financial Statements and Reports, 1959-1963.

TABLE 3

FEDERAL ASSESSMENT STATISTICS
1959-1963[a]
(in thousands of dollars)

Year	Federal Government Property Assessment	Federal Grant in-lieu-of Taxes	Comparative Tax Levy	Grant as a Percentage of Tax Levy
1959	$ 8,497	$459	$518	88.61
1960	8,114	460	511	90.02
1961	8,235	498	552	90.22
1962	11,438	491	543	90.42
1963	11,101	509	527	96.58

[a]Source: The City of Edmonton, Financial Statements and Reports, 1959-1963.

level. Table 3 indicates that the federal government is more concerned with contributing an equitable grant in-lieu-of-taxes to the city than is the provincial government by whose sanction the city exists.

Table C-5, in Appendix C, also indicates $10,470,110 of exempt property used for religious purposes. The tax revenue lost in this case is $497,330. Recent statistics indicate that approximately 40 per cent of the population are using these religious facilities, some of which are quasi-commercial in nature. Those people who are not using the facilities or are not associated with any specific denomination are subsidizing the users through higher taxes.

Through special agreements with the city, $3,332,440 worth of commercial property was exempted in 1963 from a $158,291 tax levy. This property included the Macdonald Hotel, the Airlines Hotel, the Highlands Golf Course and agricultural buildings. Tax revenue of $30,655 was also lost because of the exemption of privately owned cemeteries assessed at $645,360.

The above discussion centers attention on a point raised in Chapter I in regard to the assessment of improvements for property tax purposes. We have seen in the first part of this section the present basis for the assessment of improvements. This is a middle-of-the road position between

site-value taxation and 100 per cent assessment of all land and improvements. It is important to recognize that land and improvements have different elasticities of supply. The tax on improvements tends to be shifted to the tenant during normal, as well as, boom times. During a recession the owner may have to absorb all or part of the tax. The tax on land, however, is capitalized, that is, it reduces the market price of land.[8] The first point advanced is that:

> When ample material and labor are available, a reduction in the tax on improvements should stimulate new construction, increase total housing space and benefit home owners and tenants alike. . . . A tax reduction on land will have no effect on construction but will be capitalized by landowners.[9]

A second point advanced in favor of a land tax is that such a tax enables municipalities to obtain a larger share of community-created land values.

> . . . Since land value is primarily a social value which arises where people cluster together for exchange and social intercourse, it is particularly suitable for taxation, since taxation itself is a social phenomenon, the need for which arises out of the same clustering of

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[8] C. Shoup, "Capitalization and Shifting of the Property Tax," Property Taxes (New York: Tax Policy League, 1940), pp. 187-204.

[9] Walter Morton, Housing Taxation (Madison: University of Wisconsin Press, 1955), p. 176.

population.[10]

The property tax then rests upon the site value or the potential earning power of the site with no consideration to the extent of development of the property. The result is a diminution of speculation and withholding of vacant or poorly developed property.

> Considering that speculation in centrally located sites is as much a cause of blight and a barrier to natural renewal as speculation in peripheral sites is a cause of urban sprawl and premature subdivision (with all that these imply), a tax which tends to check speculation can rightly be described as beneficial.[11]

In the City of Edmonton, a change to site-value taxation would have a tendency to decrease the tax levy on most residential property, as well as the tax levy on some very large downtown commercial developments, because the value of improvements in relation to the value of land is higher than the average city ratio. To counter-balance this decrease in tax revenue, the tax levy payable by owners of vacant and underdeveloped land would rise considerably.

The actual changes in taxes payable is arrived at by

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[10] Mary Rawson, Property Taxation and Urban Development, Research Monograph 4 (Washington: Urban Land Institute, 1961), p. 10.

[11] Ibid., p. 11.

computing the average improvement ratio for the city.[12] All parcels with an improvement ratio greater than the city average of 4.3:1 would find their taxes reduced; those with a lower ratio would experience increased taxation.

The opposite idea to site-value taxation is that all land and improvements should be assessed at 100 per cent of actual value. The main argument is that improvements represent wealth and that the property tax is meant to be a tax on wealth in this and in land form. The property tax is essentially based on ability-to-pay which is the prevailing philosophy in Canadian taxation. But the property tax is also a benefit tax since improvements receive police and fire protection, and the benefits of other city services. Therefore, such property should provide revenue on the basis of its value.

Secondly, the taxation of improvements would not necessarily cause increased speculation in land because the demand for land is the cause of speculation.[13] The tax on improvements would not affect construction to any great

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[12] The average improvement ratio is the ratio of the assessed value of improvements to the assessed value of land within the city.

[13] In an interview, the City Assessor stated that in his opinion the present levy on land would prevent speculation to a great degree if it were not for zoning that did not reflect the demand for certain types of land use.

extent as taxes are not high and in the case of industrial and commercial property they can be written off as an expense for income tax purposes. With these arguments in mind it is now being argued in Alberta that the partial exemption of improvements in the urban municipalities and the complete exemption of farm improvements has resulted in the wealthier commercial property and farms being subsidized by residential property and small commercial property.

b) An Analysis of Assessment

Table C-6 in Appendix C indicates the increase in net taxable assessment in Edmonton since 1946. It can be seen readily from this table that there are many fluctuations in the mill rate, the latter being dependent on the tax revenue required in relation to net taxable assessment.

Net taxable assessment will change if the assessment standards change and thus the mill rate is not an accurate indicator of the level of taxation.[14] In fact, the current levy is a better indication of the tax burden, and the per capita levy is even more meaningful. According to ex-mayor E. Roper the following cities had these per capita property tax levies.

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[14] These standards were changed in 1962 when the city adopted the new provincial assessment standards.

TABLE 4

PER CAPITA PROPERTY TAXES SELECTED CANADIAN CITIES[a] 1963

Edmonton	$ 87.75
Calgary	99.04
Vancouver	101.51
Winnipeg	118.66
Hamilton	128.99

[a]Source: Edmonton. Personal Interview with the City Comptroller.

In comparison with the above cities the tax levy in Edmonton is not unduly high and could be raised considerably in the future without hardship in most cases. However, city councils are reluctant to be associated with sharp increases in taxes. All tax increases are resented by the taxpayers, though they usually welcome increases in services.

In Table C-7, Appendix C, a complete breakdown of the 1963 assessment roll is given. In Table C-8, the relative importance of each major category is indicated for 1963. Total residential property accounts for 65.88 per cent, and non-residential property accounts for 34.12 per cent, of total assessment. Considering that single-family residences are assessed at 50 per cent, with all other buildings being assessed at 60 per cent, it can be seen that the ratio of non-revenue producing residential property to revenue-producing non-residential property is quite high.

This is an unfavorable condition from a revenue point of view, and the need for more industrial and commercial property in Edmonton is strongly indicated. Table C-9 provides the same data for 1964, with residential property increasing to 66.33 per cent of total taxable assessment. Of necessity, the heavy industry is locating in the County of Strathcona because of the lack of adequate land space within the city. The Local Authorities Board of Alberta has not seen fit to include much of this industry within the city which had a per capita assessment of $1,879 in 1963. Instead, the adjacent industry remains in the county, and as a result the latter had the highest per capita assessment of any municipality in Alberta--$3,100.

The total collection of current taxes made by the city, including discounts allowed, was $32,806,824 in 1963, or 94.06 per cent of the year's levy, as compared with 93.99 per cent in 1962 and 94.88 per cent in 1961.[15]

Property taxation has provided a varying proportion of total current revenue. Between 1946, when it comprised 68.34 per cent, and 1963, when it provided 61.89 per cent, property taxation fluctuated between 59.47 per cent and 70.09 per cent of total revenue. In 1946, the property tax

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[15] Appendix C, Table C-10.

levy amounted to $4,136,000. By 1963, it had increased to $32,431,000. In per capita current dollars, the increase was 197 per cent from $35.97 to $106.77.[16]

The property tax will most likely continue to provide about 60 per cent of total current revenue in the future. This will likely mean an increase of about 40 per cent in per capita property taxation. The use of other methods of taxation will not alleviate the burden of the property tax because of the increase in per capita expenditures that will be required, but they would spread the burden differently.

2. Business Taxation

The City of Edmonton has passed a bylaw for the assessment of any or all businesses conducted within the city. The valuation for business tax purposes is 100 per cent of gross rental value. Taking advantage of the permissive or enabling section of The City Act,[17] the city has grouped businesses into classes, according to the type of business, with the tax rate varying from 6 to 20 per cent.[18]

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[16] *Ibid.*, Tables C-1, C-2, and C-3. In terms of constant 1961 dollars, the per capita increase was 57 per cent from $65.47 in 1946 to $102.50 in 1963. See Table C-4.

[17] Alberta, *Revised Statutes*, Chapter 42, Section 478.

[18] *Appendix C*, Table C-11 provides a detailed listing of the business tax categories and rates applicable.

The average yield from the business tax is over 11 per cent of the assessed value. The following table indicates the revenue obtained from the business tax for selected years.

TABLE 5

BUSINESS TAX VALUATION AND REVENUE PRODUCED
THE CITY OF EDMONTON
1946-1963[a]

Year	Assessed Valuation	Assessed Tax	Tax as a Percentage of Valuation
1946	$ 3,924,985	$ 373,362	9.51%
1952	9,005,700	991,969	11.01
1955	12,300,000	1,350,000	10.98
1958	17,398,620	1,974,804	11.35
1961	21,870,375	2,467,155	11.28
1962	23,115,010	2,600,660	11.25
1963	23,913,000	2,698,363	11.28

[a] Source: City of Edmonton, Assessor's Department.

As a whole, the business tax is more feasible administratively than a personal property tax. The classifications are based on ability-to-pay to some extent, and since their adoption, there have been practically no complaints by the businesses so classified.

Commercial enterprises of the provincial government, such as the Alberta Liquor Control Board and the Alberta Treasury Branches, are not subject to the business tax, yet

their exclusion seems hardly equitable.

As a percentage of total revenue, the business tax has been declining since 1955 when it produced 7.35 per cent of current revenue. In 1946, business taxation produced 6.17 per cent of revenue, while in 1963 it produced 5.12 per cent. In per capita terms, this amounted to $3.24 in 1946 and to $8.84 in 1963; the increase being 173 per cent.[19]

A projection of the trend in per capita revenue obtained from business taxation over the past ten years indicates that per capita revenue will likely increase about 36 per cent to $12.01 in 1973. On the basis of the projected population of 428,500 in 1973, total revenue from the business tax would amount to $5,146,000, or 4.49 per cent of total projected current revenue in that year.[20] There is a possibility of increasing the assessments of certain types of business for tax purposes. Much of the civic centre development will benefit business downtown to a great extent. Since the business community will receive most of the

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[19] *Ibid.*, Tables C-1, C-2, and C-3. In terms of constant 1961 dollars, the per capita increase was only 44 per cent from $5.90 to $8.49. *Ibid.*, Table C-4. It is entirely possible that the rates for the business tax may be increased in order to provide a greater amount of revenue in the future. A projection of business tax revenue does not take account of this factor as the rates have never been changed since their adoption.

[20] *Ibid.*, Table C-12.

indirect benefits of the development and are able to deduct the tax as an expense for income tax purposes, these businesses could justifiably be required to provide additional city revenue through the business tax.

B. Other Revenue Sources

Included in this section are all indirect tax, as well as non-tax, sources of city revenue.

1. General Departmental Revenue

Included in this category are revenues from licences, permits and parking operations, city property rentals, City Hall rents, the Northwestern Utilities, Ltd. gas franchise tax, fines, interest earnings, service charges, such as zoning fees, fire calls, land sales, commissions and engineering, and finally parks and recreation and market services.

The franchise agreement with Northwestern Utilities obligates that company to pay the city a franchise tax amounting to 5 per cent of gross revenue. This is an indirect tax that the gas company passes on to its consumers to a great extent--the gas company being a tax collector for the city, besides paying part of the tax.[21] The following

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[21] Gas rates have been steadily rising in Edmonton

table indicates the contributions of the gas franchise tax to city revenue.

TABLE 6

NORTHWESTERN UTILITIES LTD.
GAS FRANCHISE TAX
1952-1963[a]

Year	Tax Revenue (in $'000)	Tax Revenue Per Capita
1952	$236	$1.39
1953	249	1.36
1954	287	1.45
1955	323	1.54
1956	347	1.55
1957	354	1.49
1958	373	1.48
1959	448	1.72
1960	558	2.07
1961	561	2.03
1962	612	2.07
1963	624	2.05

[a]Source: The City of Edmonton, _Financial Statements and Reports_, 1952-1963.

Early in 1964, the city decided to study the feasibility of purchasing the gas company. One of the main problems in purchasing the company is that its territory

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and this is viewed with consternation by those industries which located in this region to take advantage of fuel costs sufficiently low to offset the increased costs of transportation. The franchise tax penalizes these firms because of their specific mode of manufacture. To some extent the tax has caused the increases in gas rates.

covers much of north central Alberta, and not just the City of Edmonton.

In 1946, general revenue provided 12.30 per cent, or $744,000, of total current revenue. By 1963, this proportion had fallen to 8.40 per cent, producing $4,401,000. In per capita current dollars, general revenue was $6.47 in 1946; it reached a high of $21.22 in 1960, and in 1963 was $14.49.[22]

A projection of the per capita revenue obtained from general revenue indicates that in 1973 it will amount to approximately 8.74 per cent of total revenue, or $23.38 per capita, which would be 61 per cent higher than in 1963. Total general revenue would be up 128 per cent at $10,018,000 in 1973. The year 1963 was an exception to the trend with revenues much below the expected amount.[23]

2. Government Grants

A far-reaching approach to the problems of intergovernmental fiscal relations is the use of a system of grants under which the senior government makes grants of

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[22] Appendix C, Tables C-1, C-2, and C-3. In terms of constant 1961 dollars, general revenue increased 18 per cent from $11.78 per capita in 1946 to $13.91 per capita in 1963. See Table C-4.

[23] *Ibid.*, Table C-12.

money to the local government. These grants may be "conditional"--granted for specific purposes, and their use subject to supervision--or they may take the form of "block grants"--unconditional, without specification of purpose or supervision. Grants-in-aid are not usually linked to particular taxes, but are paid from general revenue funds, and the allocation is made on the basis of some criteria of need, rather than of origin of the revenues.

In Alberta the provincial grants are of several kinds. There is a road maintenance grant based on a formula of $500 per mile of provincial highway within a municipality. This grant brought the City of Edmonton $20,000 in 1963. There is the municipal assistance grant which is an unconditional grant, received annually since 1951, from the proceeds of the provincial gasoline tax. This grant is distributed on a per capita basis and has contributed large sums to the city, as Table 7, on the following page, attests. The provincial government sets aside $15,000,000 annually for the Municipal Assistance Fund. Since Edmonton's population has grown more rapidly than the average municipality in Alberta, the city's share has increased. Because the total amount of the fund has remained static, the amount per capita has been falling steadily since 1958, and has been far from adequate considering the needs and resultant costs

inherent in rapid population growth.

TABLE 7

MUNICIPAL ASSISTANCE GRANT
THE CITY OF EDMONTON
1951-1963[a]

Year	Total Grant	Per Capita Grant
1951	$ 841,735	$ 5.30
1956	1,744,697	7.79
1957	2,204,264	9.25
1958	2,657,542	10.54
1959	2,675,274	10.26
1960	2,700,236	10.03
1961	2,701,739	9.79
1962	2,836,736	9.62
1963	2,848,117	9.38

[a] The City of Edmonton, Financial Statements and Reports, 1951, and 1956-1963.

The provincial government also gives a grant in-lieu-of-taxes on provincial property within the city. This grant is given to compensate for the loss of tax revenue resulting from the exemption from tax of Crown property as embodied in "The City Act." Since the benefits from the provincial government's existence is received by all the people of Alberta, while the city must bear the costs of providing services for the government's employees, it seems reasonable that the city should be reimbursed to the full extent of the lost property taxes. As Table 2 indicated, this is not the

case.

The federal government is under no obligation to make grants in-lieu-of-taxes, but it has been the policy of that senior government to make such grants. Table 3 indicated the value of such grants and their relation to the assessable property of the Dominion government in Edmonton. As can be seen from the table, the federal government compensates the city almost in full with reference to property.

In 1946, all government grants amounted to only 0.50 per cent of total current revenue, or $30,000. By 1963 they had increased to 10.53 per cent, or $5,519,000. In current dollars per capita, the increase was from $0.26 in 1946 to $18.17 in 1963.[24]

On the basis of the increase in government grants over the past ten years, a projection of the trend experienced indicates an increase in government grants of 71 per cent to $30.09 per capita in 1973. The increase over the previous ten years was 125 per cent. If this amount were to be spent, government grants would amount to $13,279,000, or 11.58 per cent of projected total revenue in 1973.[25]

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[24] _Ibid._, Tables C-1, C-2, and C-3. In constant 1961 dollars, the increase was from $0.47 to $17.44. See Table C-4.

[25] _Ibid._, Table C-12.

3. Contributions of the City-owned Utilities

Government enterprises, particularly at the local level, sometimes deliberately seek to maximize profits in order to provide a "painless" means of covering governmental expenditures. Some municipal utility systems point with pride to their high profits, which allow the city to operate with lower "direct" taxes.

Several major objections can be advanced against this policy. In the first place, the setting of a high price in order to obtain large profits restricts consumption of the utility service to lower levels than would normally be used if the service were provided at cost (including investment costs). Secondly, the policy amounts essentially to an indirect tax on the users of the service, comparable to the excess profit of a private monopolist. Utility revenues are not a proper base for equitable taxation. Relative to their incomes the poorer consumers are taxed more. These levies also discriminate among different types of industry, with those consuming large quantities of water and/or electricity being penalized to the extent that the rates charged are in excess of costs incurred to supply the services.[26] It is important to stress here that low cost electricity and

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[26] Due, op. cit., chap. 6.

water are essential to the industrial advancement of the city.

The concealment of the tax may be regarded, in itself, as undesirable. This objection is based on the belief that at the municipal level of taxation, the citizens should know the amount of the tax which they have to pay. It may be more desirable for monopoly profits to accrue to the local government than to a private company, but it is clearly undesirable for either to gain such a profit.

The following five sub-sections, with accompanying tables, indicate the extent of the utility contributions to city revenue over the past five years.

a) The Power and Water Treatment Plant

The power plant, as it will be called in this subsection, generates the electricity used in the city and treats all the water supplied. The power plant sells the electricity to the electrical distribution system and the water to the waterworks distribution system. Table 8 indicates the contribution of the power plant on the basis of the municipal tax levy, and the 5 per cent gross revenue tax, which is levied on all city-owned utilities, plus the surplus allocated to the city's general revenue after the reserves for plant extension have been provided. Over the

TABLE 8

CONTRIBUTIONS TO GENERAL REVENUE BY THE POWER PLANT 1959-1963[a]

Year	Municipal Tax Levy	5% Gross Revenue Tax	General Revenue to City	Total	Total as a Percentage of Gross Revenue
1959	$213,500	$263,330	$ 745,253	$1,222,083	23.20
1960	220,500	288,912	750,279	1,259,691	21.80
1961	234,500	315,839	752,383	1,302,722	20.62
1962	166,247	339,509	831,129	1,336,885	19.64
1963	169,637	386,180	1,123,016	1,678,833	21.74
				$6,800,224	

[a]Source: The City of Edmonton, Financial Statements and Reports, 1959-1963.

last five years the power and water treatment plant has contributed on the average 21.41 per cent of its gross revenue to the city.

b) The Electrical Distribution System

This department has contributed 21.38 per cent of its gross revenue to the city in the past five years. The following table indicates the size of these contributions.

TABLE 9

CONTRIBUTIONS TO GENERAL REVENUE BY THE ELECTRICAL DISTRIBUTION SYSTEM 1959-1963[a]

Year	Municipal Tax Levy	5% Gross Revenue Tax	General Revenue to City	Total	Total as a Percentage of Gross Revenue
1959	$213,500	$477,358	$1,130,674	$1,821,532	19.08
1960	220,500	514,505	1,483,944	2,218,949	21.56
1961	234,500	549,745	1,573,704	2,357,949	21.45
1962	288,588	589,543	1,731,395	2,609,526	22.13
1963	294,602	627,532	1,924,805	2,849,939	22.68
				$11,854,895	

[a] Source: The City of Edmonton, Financial Statements and Reports, 1959-1963.

c) The Waterworks System

This department provides all the water used in the city and in some outlying areas. It has had an average ratio of operating costs to total revenue of 0.55:1 for the past ten years. While its average yearly contribution to city revenue has been 25.15 per cent of its gross revenue for the past five years, this has been steadily mounting, until in 1963 it contributed 29.07 per cent.

TABLE 10

CONTRIBUTION TO GENERAL REVENUE BY THE WATERWORKS DEPARTMENT 1959-1963[a]

Year	Municipal Tax Levy	5% Gross Revenue Tax	General Revenue to City	Total	Total as a Percentage of Gross Revenue
1959	$213,500	$205,624	$ 497,705	$ 916,829	22.29
1960	220,500	217,207	628,089	1,065,796	24.53
1961	234,500	236,141	618,762	1,089,403	23.07
1962	166,250	234,479	861,246	1,261,975	26.80
1963	166,250	261,093	1,097,726	1,525,069	29.07
				$5,859,072	

[a]Source: The City of Edmonton, Financial Statements and Reports, 1959-1963.

TABLE 11

CONTRIBUTION TO GENERAL REVENUE BY THE TELEPHONE SYSTEM 1959-1963[a]

Year	Municipal Tax Levy	5% Gross Revenue Tax	General Revenue to City	Total	Total as a Percentage of Gross Revenue
1959	$244,000	$280,179	$ 336,819	$ 860,998	15.36
1960	252,000	332,162	839,166	1,423,328	21.43
1961	268,000	388,804	882,524	1,539,328	19.80
1962	145,692	415,435	1,012,050	1,573,177	18.93
1963	154,799	457,618	1,475,484	2,087,901	22.81
				$7,484,732	

[a]Source: The City of Edmonton, Financial Statements and Reports, 1959-1963.

d) The City Telephone System

The telephone system has contributed 19.67 per cent of its gross revenue to the city in the past five years. The contribution tended to fluctuate to a great extent, as Table 11 attests.

e) The Edmonton Transit System

The following table indicates the extent of the city transit system's current operating deficit. The deficit has averaged approximately 6.24 per cent of gross revenue over the past five years. Since 1960, this deficit has increased

TABLE 12

CONTRIBUTIONS TO GENERAL REVENUE
BY THE TRANSIT SYSTEM
1959-1963[a]

Year	Municipal Tax Levy	5% Gross Revenue Tax	Deficit to General Revenue	Total Deficit	Total Deficit as a % of Gross Revenue	Transit System Passengers (Thousands)
1959	$30,500	$183,412	$ 99,033	$ 114,879	3.10	29,143
1960	31,500	173,717	233,103	27,886	0.80	28,157
1961	33,500	169,852	508,357	305,005	8.98	27,161
1962	77,760	. . . .	320,687	242,927	6.35	27,849
1963	77,550	. . . .	536,448	458,898	11.95	27,049
				$1,149,595		

[a]Source: The City of Edmonton, Financial Statements and Reports, 1959-1963.

considerably. The transit system deficit is covered by the general revenue of the city.

It can be seen from the above table that the number of passengers carried has been decreasing over the past five years. This trend and the resulting deficit, which is accelerated by the ever-increasing distances to be covered, is viewed with concern by many civic officials.

If substantial indirect benefits accrue to the community, the enterprise may be economically justifiable even if it shows a deficit. The Edmonton Transit System itself cannot realize financially on the indirect benefits; if it is estimated that the real benefits to society exceed the real costs, operation of the enterprise is warranted. While the transit system is not financially profitable, it is justified by the gains from lessened traffic hazards and avoidance of loss of time for motorists and transit riders, that offset the burden of the taxes necessary to cover the deficit. Evaluation of relative benefits and relative costs is necessarily, of course, a matter of community judgment.[27]

This concept seems to have been ignored somewhat by the Edmonton Transit System as regards its pricing policy. Transit fares have been raised 100 per cent in the last few

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[27] See: R. A. Musgrave, The Theory of Public Finance (New York: McGraw-Hill, 1959), chap. 4.

years, much to the consternation of low income transit users. The backbone of the transit system is the revenue received from workers or persons in lower income groups, who have no other mode of transportation. From a social point of view, there can be no argument in favor of a city exacting profit from a specific group (the users) that does not receive all the benefits (including social benefits) of the transit system. Instead of raising fares in an attempt to lower the deficit, the Edmonton Transit System should concentrate its efforts on furnishing transportation at a price within the financial reach of most of the low-income passengers. Corrective measures would be to impose a $10.00 city licence on all vehicles within the city, and also to raise parking meter rates to $0.25 per hour in the central business district. Unless there are low cost transit fares, the last corrective measure may have adverse effects on downtown shopping.

f) The Edmonton Industrial Airport

By an historical accident, the Edmonton Municipal Airport was located almost in the center of the present-day city. Pre-World War I optimism foresaw a city of 400,000 people by 1930, but the war and collapse of the land boom produced a pessimism that considered the airport to be well outside the city proper. The result has provided many

unfortunate repercussions. The "jet age" of post-World War II brought planes unable to land on the small runways without excessive noise and increased accident possibilities.

The federal government has now built a multi-million dollar international airport, fifteen miles south of the city at Nisku. Because of this, the municipal airport's air traffic has decreased substantially, as has its revenue. Due to commitments to the aero-industries located at the municipal airport, the city has continued to maintain the facilities. The airport still causes noise near the Royal Alexandra Hospital and restricts the height of buildings in the central business district.

TABLE 13

CONTRIBUTION TO GENERAL REVENUE BY THE INDUSTRIAL AIRPORT
1959-1963[a]

Year	Municipal Tax Levy	Surplus or Deficit (*) to General Revenue	Total	Total as a Percentage of Gross Revenue
1959	. . .	$147,994	$147,994	37.97
1960	. . .	160,891	160,891	40.45
1961	$2,301	10,533*	8,232*	4.18
1962	2,299	87,506*	85,207*	38.30
1963	2,397	30,345*	27,948*	10.73

[a] Source: The City of Edmonton, Financial Statements and Reports, 1959-1963.

There is much opposition to maintaining the airport, except from the flying clubs and airport industries, but the possibility of vertical takeoff in the near future may see a revival of the airport. The above table indicates the revenue contribution of the municipal airport over the last five years.

All considered, the city-owned utilities have contributed considerable revenue over the past years. In 1963, the utilities contributed 12.95 per cent of current revenue, or $6,787,000. Their contributions were at a low in 1951 when utilities accounted for only 5.93 per cent of revenue. Between 1946 and 1963, the per capita revenue contributed by the utilities increased 234 per cent from $6.68 to $22.34.[28]

A projection of the contribution to city revenue by the utilities, based on the past ten years, indicates a contribution of $38.58 per capita in 1973. This figure is 73 per cent higher than that of 1963, while the 1963 figure was 169 per cent higher than that of 1953. On the basis of this projection, the utilities would provide 14.42 per cent of current revenue, or $16,532,000, in 1973.[29] The previously

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[28] Appendix C, Tables C-1, C-2, and C-3. These figures take account of deficits. In per capita constant 1961 dollars, the increase was only 76 per cent from $12.16 in 1946 to $21.45 in 1963. See Table C-4.

[29] Ibid., Table C-12.

mentioned argument against this form of indirect taxation notwithstanding, it is expected that the City Council will continue to use--and even to expand--this revenue source so as to relieve the property tax.

C. Possible New Revenue Sources

1. A Municipal Income Tax

A relatively new development at the municipal level is the use of income taxation. The City of Philadelphia was the pioneer when that city introduced the payroll tax in 1940. Nearly 500 cities and school districts employed a form of income tax in the United States in 1958. While this method of taxation is not presently open to the City of Edmonton, due to the provisions of "The City Act," it is worth noting.

The municipal levies do not usually apply to all income; they are normally levied only on wages and salaries, plus the net profits of business enterprises. Thus investment income is completely exempted, primarily for administrative reasons. Exemptions are seldom provided and the rates are very low with 1.0 per cent being the most common. Progressive tax rates are not employed. The income earned in the city by non-residents is taxed, as well as taxable

forms of income earned outside the city by residents.[30] There are problems, however, as it is difficult to prevent evasion. The base of the tax discriminates against wage and salary income. On the whole, a city is too small a unit to administer an income tax effectively, and any increase in scope and rates could easily have serious consequences, driving people and industry outside the city limits.

If the City of Edmonton is to employ a municipal income tax, either of two conditions must be fulfilled. The city must have fiscal jurisdiction over the entire metropolitan area or be able to tax all income earned within the city by all the residents, non-residents, and firms. In the first case, evasion of the tax would be greatly lessened. In the latter case, non-residents employed in the city would be taxed. The large number of people working in the County of Strathcona, (which obtains the large property taxes on industry), but living in Edmonton, would also be taxed. As far as administrative feasibility is concerned, the city could make an agreement with the federal government to collect the tax.

In 1962, a 1.0 per cent income tax on all taxable income in Edmonton would have derived a gross revenue of

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[30] Due, _op. cit._, chap. 6.

$2,775,000, which is equivalent to 5.67 per cent of total revenue, and also equivalent to 8.35 per cent of the property tax levy or 3.97 mills.

2. A Municipal Retail Sales Tax

The use of sales taxes by municipalities is largely a post-war phenomenon. Its use was brought about because municipalities were hard pressed financially and there was strong resistance to substantial increases in the property tax.

By far the best method of collecting a municipal sales tax is for the province to collect the city's share at the same time that it collects the provincial sales tax. Thus, the bases of the local and provincial taxes are identical. Enforcement and compliance problems are minimized, although a marginal incentive to shop outside the city limits will remain unless the city limits encompassed the entire metropolitan area. With the tax rate being from 0.5 to 1.0 per cent, this problem is not usually serious. At the present time the Province of Alberta does not impose a sales tax, nor does the Province of Manitoba. They are the only two provinces in Canada that do not. Should the Province of Manitoba eventually levy a sales tax, because of the need for additional revenue, it is quite likely that the

Province of Alberta will follow suit in a few years, but not until then. The reason is that the Province of Alberta has accumulated surpluses of revenue over expenditures which may enable the province to postpone the imposition of a sales tax.

In the next few years, with the costs of education and highways mounting, the provincial government may find it expedient to levy a sales tax. If this tax is imposed, it is possible that the city could append a fractional tax rate as a means of deriving revenue and broadening the local tax base. In 1962, a 1.0 per cent sales tax on retail sales of $451,000,000 would have given the city a gross revenue of $4,510,000 had it been imposed. This amount would have been equivalent to 9.22 per cent of total revenue, and also equivalent to 13.57 per cent of the property tax levy or 6.45 mills.

In both the above tax methods, the administrative problems involved would tend to be insuperable. The best answer to increasing revenue is for the provincial government to levy the sales tax, in the second method, on all municipalities, and rebate each municipalities share to that municipality or distribute the funds from a sales tax on a population basis. In the case of the income tax, the province should distribute more and more of that revenue to

the municipalities as the province's share of the income tax increases. The two methods of taxation mentioned above would have, if they had been employed, reduced the property tax by almost 10.43 mills to 37.07 mills in 1962.

D. Summary and Conclusions

In this chapter the various current revenue sources of the City of Edmonton have been discussed. These sources have increased substantially over the past ten years to provide the funds required for needed expenditures. In per capita terms, the increase in local taxation through property taxes, business taxes and indirect utility taxes has been about 84 per cent since 1954. During the same period, per capita income increased by 35 per cent. Whereas local taxes per capita amounted to 7.26 per cent of per capita income in 1946, these taxes had fallen to 5.31 per cent of per capita income in 1953. This percentage has risen to 7.63 per cent in 1963. Thus, while taxes have risen faster than income in the past ten years, taxes as a percentage of income are not much greater than they were in 1946, and there is a much greater absolute amount of disposable income retained by the taxpayer. If incomes and local taxes increase as projected, local taxes will amount to 8.60 per cent of per

capita taxable income in 1973.[31]

Taxes must increase if the city is to continue to provide the equivalent level of services that it did in 1963. In order to lessen the restrictive effects of increased property, business and utility taxes, the new tax methods suggested in the previous section could be implemented to broaden the tax base. In any case, the property tax will continue to be the main source of revenue.

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[31] Appendix A, Tables A-20 and A-22.

CHAPTER IV

CAPITAL EXPENDITURES

A municipality has responsibility for the orderly development of public facilities within its boundaries. Typically, the city is interested in providing the services necessary for sustaining the economic and cultural growth of the city area and this means, for example, that recreation facilities, streets, bridges, water and sewage systems must be adequate to support the development of the local economy. This provision of "social capital" enables the local industries and services to become more efficient through faster communications, transportation, etc., and to be more competitive in the market because of the provision of low cost electricity, water and gas. As the population, income and wealth of the area grow, so do social capital requirements.

The desire for community growth results in a peculiar interrelation. As capital expenditures increase, the community grows and this growth results in the need for more and more capital expenditures on schools, roads, etc., to provide for the greater population and traffic. These

expenditures require funds, and tax revenue must be increased to meet the expanding needs. The actual financial position of a city depends on the rates of increase of population, incomes, revenue and debt. If debt rises faster than incomes and current revenues there is cause for worry. During the depression some cities were expending up to 50 per cent of current revenue on debt retirement. There was no financial disaster, but the provision of other services was curtailed. A rapidly growing city usually has a rapidly growing debt, but incomes and assessments, which ultimately affect the ability of the municipality to repay the debt, are usually increasing at the same time.

Local economic development is contingent, at least in part, upon the level of local tax burdens. The construction of public facilities must therefore be accompanied by strict attention to local tax burdens. The city council must continually search for the optimum level of public services adequate to attract and support economic development at a cost which does not impose undue burdens on that development.

Municipalities operate with limited fiscal resources. Their revenue sources are circumscribed by provincial legislatures. There are limits on the types of taxes that may be imposed, limits on the subjects that may be taxed, and

limits on the bonded indebtedness that may be incurred. Municipalities must conduct their affairs in accordance with the traditional canons of sound finance. Moreover, these will likely be enforced by the provincial government through "The City Act" as far as Edmonton is concerned. Investment bankers will also enforce sound financing; for the municipality must turn to them for loan finance. Municipalities must therefore conform to conventional standards of fiscal capacity enforced on business corporations that undertake to sell their securities to the public.

Municipalities must pay attention to cost in relation to development and to their own operation within a pattern of limited fiscal resources. In a rapidly growing city like Edmonton "it is impossible to pay for a large volume of public works from current tax revenue without a sharp and unpalatable increase in the tax rate."[1] Furthermore, current financing of major improvements means that the present generation is providing major improvements that future generations will use. As a matter of equity, future users should contribute to the cost. This widespread attitude toward local improvements and their cost distribution over time serves to justify loan finance, apart from

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[1] James A. Maxwell "The Capital Budget," Quarterly Journal of Economics, LVII (May, 1943), 453-455.

considerations about the regularization of tax rates. In some cases where specific non-recurring public improvements can be financed by charges against the users of the facilities, this approach goes one step further to justify the establishment of special public corporations.

In this framework, a substantial number of cities have found that a capital budget greatly facilitates financial planning and budgetary decision making.[2] The capital budget, as it is typically used, provides a vehicle for financial planning and for the regulation of local tax rates. It thus contributes to financial solvency, and at the same time assures that over a period of years needed improvements will be constructed. The capital budget, when linked with a long-range improvement plan, enables local government officials to deal with the representations of the various civic interest groups.

A. Analysis of Capital Expenditures

Capital expenditures by governments can be grouped into two major categories: new construction and expenditures on machinery and equipment. As in the case of private accounting, one of the major problems in governmental

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[2] Frank P. Sherwood "Capital Improvement Planning: A Report," Municipal Finance (May, 1954), p. 132.

accounting is the distinction between current operating expenditures and capital expenditures. The division based on life expectancy emphasizes the difference between final product which is used up during the accounting period and final product which produces benefits that accrue partly in the future. The principal problems involve the distinction between major repairs and alterations that extend the life expectancy of capital assets or increase their usefulness which should be included as capital expenditures, and ordinary maintenance and repairs which should be treated as current expenditures. Another important problem involves certain expenditures for improvements whose life expectancy is longer than a year, but which are reported as current expenditures. These problems are inherent in any attempt to compare data on capital expenditures, either by different governments or by different functions for different years.

In this analysis of the capital expenditures of the City of Edmonton, we will include, as nearly as can be determined, those expenditures on improvements whose life expectancy is greater than one year and any alterations which extend the life of those improvements. Similar categories have been grouped together because of wide fluctuations in any specific type of expenditure.

Past capital outlays reflect two sets of

considerations, engineering and economic. Engineering considerations determine the various technical possibilities; from these the community must choose what capital plant it desires. In the case of local government, this is decided by the community's demand for the given facility and by its fiscal resources. In some instances, definite economies of scale in the construction of capital plant can be achieved.

Only a facility-by-facility analysis of capital outlays could provide the possibility of an answer to the very important question of economies of scale in government operations. These economies are most likely to be found in the provision of capital improvements. It should be noted that the largest-sized is not necessarily the most efficient-sized capital outlay.

Since 1946, the total capital expenditures for municipal and school purposes in the city increased from \$3,200,000 to \$30,600,000 in 1963. A maximum was spent in 1957, when capital expenditures totalled \$38,600,000 as a result of greatly increased capital expenditures by the school boards. After 1950,[3] the annual per capita capital expenditures rose from \$100.04 to a high of \$162.00 in 1957, and

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[3] The year 1950 is used because of the unreliability of pre-1950 data.

declined to \$100.74 in 1963.[4]

From the tables in Appendix D, the significant rise in capital expenditures by the city can be readily seen. There are many reasons for this growth. Firstly, the rapid rate of population growth since the war has necessitated large capital outlays. Secondly, during the depression and the war, little maintenance or capital improvements had been carried out and a backlog of deferred public works had accumulated. Thirdly, there are more capital services being demanded and provided, and the citizens expect these services sooner than was the case in the past. It must be remembered, however, that inflation has exaggerated the size of the increase in expenditures to some extent. Since 1958, per capita capital expenditures have fallen due to the sharp decrease in the rate of increase in population. Because the population growth rate has not increased since then, and has been about three per cent per annum, expenditures per capita on capital improvements have slowly declined.

In Appendix D, Table D-2 indicates the relationship of the public utilities, the school boards and public works to total capital expenditures. Public works remain the

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[4] Appendix D, Table D-3 and D-12. In terms of constant 1961 dollars, per capita capital expenditures increased from \$137.05 in 1950 to \$173.24 in 1957, declining to \$97.71 in 1963. See Table D-4.

largest category, fluctuating between 41.1 per cent and 62.8 per cent during the period 1950 to 1963, when they averaged 53 per cent of total capital expenditures. The second largest category is the public utilities. Ranging between 20.8 per cent and 41.6 per cent, this category averaged 29.5 per cent of the total. The smallest category is capital expenditures by the school boards, averaging 17.5 per cent of the total and fluctuating from 11.2 per cent to 22.1 per cent.

In the following sections, a detailed study of these major categories will provide the basis for the forecasts of capital expenditures over the next ten years. These forecasts are tied to the forecasts of population growth made by the City Planning Department.

1. The Public Utilities

In this category are included the Electrical Distribution System, the Power and Water Treatment Plant, the Edmonton Transit System, the Edmonton Telephone System, and the Waterworks System. These five utilities altogether had capital expenditures of $1,576,000 in 1946, increased to a high of $11,923,000 in 1958, and have since declined to $8,900,000 in 1963. As will be seen below, some utilities have had steadily rising expenditures while some have had

widely fluctuating expenditures. In terms of current dollars per capita, capital expenditures by the public utilities decreased from $41.57 in 1946 to $28.17 in 1954, then increased to a high of $47.29 in 1958. Since then they have steadily decreased to $29.30 in 1963.[5]

In the following analysis, the possibility of the sale of the electrical distribution system and power plant to a provincially owned power company has been ignored.

a) The Electrical Distribution System

Capital expenditures by the electrical distribution system increased from $221,000 in 1946 to $1,937,000 in 1963. The highest total occurred in 1958 when capital expenditures were $3,700,000, 92 per cent above the 1963 value. In per capita current dollars, capital expenditures increased from $1.92 in 1946 to $14.71 in 1958, then declined to $6.38 in 1963. The tables indicate that per capita capital expenditures by the electrical distribution system increased whenever the rate of population increase was above five per cent. After 1958, the rate of population increase was only 2.5 to 3.5 per cent, and capital expenditures per capita decreased. Thus, there would appear to be

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[5] *Ibid.*, Tables D-1, D-3, and D-4. In terms of constant 1961 dollars, per capita capital expenditures were highest in 1946 at $56.95 and lowest in 1963 at $28.13.

a strong correlation between the rate of population growth and per capita outlay.[6]

> In general, the electrical utility loading grows at a somewhat higher rate than other phases of city development. This, of course, is due to a fairly steady growth of existing loads, in addition to a proportionate increase due to the new loads which result from city growth. Even if the city's population and commercial activity remained static, a growth of the order of three to five per cent would likely be experienced annually by the electrical utility.[7]

In addition to population growth, the expansion of the utility depends on new uses for electricity and improved living standards. Other factors affecting capital outlays are the trend from overhead distribution to underground distribution and the need to develop new facilities.

The electrical distribution system has made forecasts of expected growth in capital expenditures. These forecasts have been based on two assumptions: (1) that the city's metropolitan population will reach 660,000 by 1980; and (2) that the system will service the entire area encompassed by this population. The electrical distribution

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[6] Ibid., Tables D-1, D-8, and D-9. In terms of constant 1961 dollars, the increase in per capita capital expenditures was from \$3.49 in 1946 to \$15.45 in 1958. This was followed by a decline to \$6.12 in 1963.

[7] The City of Edmonton, Draft General Plan For the City of Edmonton, Part V, chapter XIII, section 4, subsection 2, p. 9.

system estimates that it will spend $75,800,000 on capital improvements between 1964 and 1973. Of this total, it is estimated that from $20,700,000 to $28,600,000 will be obtained from reserves and thus necessitate borrowing of $47,200,000 to $55,100,000. Their forecast indicates capital expenditures rising from $2,600,000 in 1964 to $15,100,000 in 1969, then declining to $7,500,000 in 1973. On the basis of the population forecast in Chapter I, this would mean an increase from $8.27 per capita in 1964 to $40.44 per capita in 1969, and then a decline to $17.50 per capita in 1973.[8]

b) The Power Plant

Prior to 1949, the Edmonton power plant used slack coal as fuel for power generation. The coal was a waste product and proved to be economical. By 1949, this fuel supply began to diminish and costs started to rise. Studies undertaken at that time showed that natural gas would be more economical than coal. As a result, the power plant was converted to gas, the changeover being completed by 1955. The adoption of gas was greatly influenced by the central location of the plant, as well as by the substantial capital savings.

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[8] Appendix D, Tables D-5 and D-10.

By 1959, however, it had become apparent that the rapid increase in the use of electricity in the city would necessitate the construction of a coal-fired plant within ten years.[9] The location of the new plant would have to be at the site of a coal mining operation and Genesee was designated as the site. Preliminary work has begun on the Genesee plant which could be operational by 1968 if load requirements in the city increase to a higher level than is presently anticipated.[10]

In the post-war period annual capital expenditures by the power plant increased from $641,000 in 1946 to a high of $3,301,000 in 1957, and declined thereafter to $1,531,000 in 1963. In terms of current dollars per capita, this represented an increase from $5.58 in 1946 to $13.85 in 1957, declining to $5.04 in 1963. This indicates that the power plant is now spending approximately the same amount of money per capita in terms of current dollars for capital purposes as it did in 1946.[11]

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[9] The reason for a coal-fired plant rather than a gas-fired plant being built is an extremely low price for coal and pressure from the Oil and Gas Conservation Board.

[10] Draft General Plan, op. cit., sub-section 1, p. 10.

[11] Appendix D, Tables D-1, D-8, and D-9. In terms of constant 1961 dollars, the power plant spent $10.16 per capita in 1946. Expenditures increased to $14.82 per capita in 1957, then declined to only $4.84 in 1963.

Over the next ten years, the power plant department estimates that it will spend $44,150,000 on capital expansion. Of this total, $10,687,000 is expected to be financed by borrowing, the remainder being financed out of reserve funds. Their estimates indicate expenditures of $1,600,000 in 1964 rising to a maximum of $7,000,000 in 1968, and continuing thereafter at approximately $5,500,000 through 1973. In per capita terms, this would mean an estimated expenditure rising from $5.09 in 1964 to $19.54 in 1968, then declining to $11.67 in 1973.[12]

c) The Edmonton Transit System

The Edmonton Transit System has a record of widely fluctuating annual capital expenditures, from as low as $31,000 in 1953 to as high as $1,860,000 in 1960. The average annual expenditure for the period 1946 to 1963 was $470,000. Capital expenditures in per capita current dollars also show wide fluctuations ranging from $0.17 in 1953 to $6.93 in 1960, the average for the entire period being $2.40.[13]

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[12] Ibid., Tables D-5 and D-10.

[13] Ibid., Tables D-1, D-8 and D-9. In terms of constant 1961 dollars, the fluctuations again appear, but 1947 becomes the year with the highest expenditure--$10.03 per capita. The year of lowest per capita expenditure remains 1953 at $0.20.

During the next ten years the transit system will likely continue to have fluctuating capital expenditures, because the purchase of capital items is based on varying needs. In estimating these expenditures, however, fluctuations are not taken into account and a steadily rising average annual expenditure is expected. This steady increase is expected to occur as the city grows and more vehicles are required to service the outlying districts, and because of greater expected usage by passengers going to the central business district. In this forecast, the effect of amalgamation with the Town of Jasper Place has been excluded. The "need" for a rapid transit system twenty to thirty years from now is also excluded, though a study done for the city indicated an expenditure in the order of $200,000,000 when it is required.

It is estimated that capital expenditures by the transit system will increase, on the average, from $422,000 in 1964 to $1,142,000 in 1973, an increase of 171 per cent. This will mean an increase of 100 per cent from $1.34 per capita in 1964 to $2.67 per capita in 1973.[14]

d) The Edmonton Telephone System

According to the telephone department its system is

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[14] *Ibid.*, Tables D-5 and D-10.

among the largest municipally owned telephone systems on the continent. It has grown from 412 stations in 1905 to 142,370 stations in 1962. When complete dial service was installed in 1908, Edmonton became one of the first cities in Canada with such apparatus. Because of the unpopularity of party line service, the system consists mainly of the straight line service. It does not as yet have direct distance dialing, but connects with Alberta Government Telephones for long distance calls. This requires weekly meetings between engineering staff of the telephone system and that of Alberta Government Telephones to work out the many interconnecting problems.

Population growth is the principal factor affecting the growth of the telephone system. Another factor which has accounted for the rapid growth since 1946 was the scarcity of supply of equipment prior to 1946. The large backlog of demand for telephone equipment which developed because of this and the rapid population growth was not satisfied until recently.

Between 1946 and 1963, capital expenditures by the telephone system increased from $300,000 to $3,131,000. The peak year was 1962 when $3,485,000 were expended. The increase in expenditures has been quite steady since 1950. In 1946, the per capita expenditure was $2.61. It increased to

$14.67 in 1953, declined and rose again to $13.05 in 1958, and in 1963, it amounted to $10.31.[15]

The growth of the telephone system in the future will depend greatly on population growth. The number of telephones per person is also gradually increasing and this trend is expected to continue. The advent of new and varied types of special equipment is also expected, such as visiphones, push-button dialing, and home-interphones. The intercommunication systems are becoming more elaborate and diversified to meet the growing needs of home and industry, and this will tend to increase capital expenditures all the more. The rate of obsolesence of special equipment seems to be very high in the telephone industry and this also affects capital costs to a great extent.

The future expansion and development of the telephone system does not depend on whether subdivisions are developed by the city or by private interests; the total cost of telephone service is borne by the department. If expansion is controlled in an orderly manner so that isolated pockets do not develop far from existing lines, economies will be obtained. If this does not occur, expensive trunk

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[15] Ibid., Tables D-1, D-8, and D-9. In terms of constant 1961 dollars, the increase was from $4.75 per capita in 1946 to $16.00 per capita in 1953. In 1963, the per capita capital expenditure was $9.90, or 62 per cent of 1953.

feeders will be required. The demand for buried telephone line installation in residential areas increases capital costs also, and a local improvement levy may be necessary if this trend continues. The size of a telephone sub-station is also limited in the number of subscribers capable of being handled. The cost of servicing central areas is less than that of servicing outlying areas and, as the city spreads out, costs are expected to increase progressively.

The following projection of capital expenditures by the telephone system assumes that the existing exchange areas remain approximately the same as at present, and that population and telephone equipment per capita density increases at an even rate over the period in question.[16] The possibility of the Edmonton Telephone System being purchased by Alberta Government Telephones is not considered in this forecast as that would remove the expenditures from the city's jurisdiction. Climatic and topographic conditions will not affect capital expenditures to any great extent, except for the crossing of various ravines and the North Saskatchewan River Valley. The cost of central exchange equipment is expected to increase as more modern types are made available to provide direct distance dialing. It is estimated that the telephone system will likely spend a

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[16] Draft General Plan, op. cit., Section V.

total of $36,700,000 on capital expenditures over the next ten years. Annual expenditures are expected to rise from $3,550,000, or $11.29 per capita in 1964, to $4,400,000, or $10.29 per capita in 1973.[17]

3) The Waterworks System

The provision of adequate amounts of good quality water for all the requirements of a modern city is the function of the Edmonton Waterworks System. The system is composed of two main divisions: (1) the treatment and pumping facilities, which are under the control of the power plant superintendent; and (2) the water distribution system, consisting of mains, storage reservoirs, service connections, hydrants, and meters, operated as a division of the city engineering department.

The water supply and purification plant supplies the water distribution system with water. There are presently two treatment plants with a total capacity of up to 55 million gallons per day during summer peak loads. Treatment includes a chlorine dioxide additive for taste and odor control introduced in 1959-1960. The City Council has also approved the construction of a third water treatment plant having a capacity of 25 to 30 million gallons per day. The

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[17] Appendix D, Tables D-5 and D-10.

first stage of this service will be in operation by 1965, and the final stage will be completed in 1970.[18]

Water is supplied by the city plant to a number of surrounding areas, including Leduc, St. Albert, Oliver, Sherwood Park and Jasper Place. The rates to these communities are higher to offset the small additional capital expenditures.

The water distribution system consisted of 764.6 miles of mains, 69,750 service connections, 4,467 fire hydrants and 68,230 meters in 1962. Storage facilities consisted of two elevated steel tanks and two reinforced concrete ground storage reservoirs with a total capacity of 25.25 million gallons. If the system outside the city is included there are 951.2 miles of mains.[19]

Factors affecting the capital expenditures are the topography, the climate and the soil. The deep-river valley necessitates the pumping of all water up to the developed level abutting the valley. As the city grows and expands to higher ground, re-pumping stations will be required. The low winter temperatures and resultant deep frost penetration requires that all mains be installed in trenches at least nine feet in depth. This increases construction costs as

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[18] Draft General Plan, op. cit., section 3, p. 2.

[19] Ibid., p. 4.

well as maintenance costs. Corrosion of metal pipelines due to soil conditions varies from negligible to severe in the Edmonton area.[20]

Capital expenditures by the waterworks system has increased from $109,000 in 1946 to $1,111,000 in 1963. In per capita current dollars, the increase for the same period was 285 per cent from $0.95 to $3.66. The peak year was 1950, when $1,709,000 or $11.49 per capita were expended.[21]

It is assumed that the North Saskatchewan River will remain the source of water supply in the next ten years. The Brazeau Dam has served to maintain a minimum winter flow of one billion gallons daily; in the summer the daily flow reaches five billion gallons. In the following forecast, it is assumed that population will grow at a steady rate, that per capita usage will remain approximately the same, that the industrial-residential ratio of usage does not alter appreciably, that the present policy of metering continues, and that the system will supply water to the entire metropolitan area.

It is estimated that annual capital expenditures by

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[20] Ibid., p. 7.

[21] Appendix D, Tables D-1, D-8 and D-9. In terms of constant 1961 dollars, the 1946 to 1963 increase was 103 per cent, from $1.73 to $3.51. Again, 1950 was the peak year with a per capita capital expenditure of $15.73.

the waterworks system will increase only 13 per cent from $1,391,000 in 1964 to $1,571,000 in 1973. This would amount to a total capital expenditure of $14,810,000 over the ten year period. In terms of per capita capital expenditures, a decrease of 17 per cent is expected from $4.42 in 1964 to $3.67 in 1973.[22] The need for a new plant by 1980 would increase expenditures substantially at that time.

f) Forecast Capital Expenditures of the City Utilities

Altogether, it is expected that on the basis of a projection of the trend for the past ten years the five city-owned utilities will spend $179,280,000 on capital improvements in the next ten years. A 174 per cent increase is anticipated from a total of $9,563,000 in 1963 to $26,163,000 in 1969 and, following 1969, a decrease of 25 per cent to $19,613,000 in 1973. This would amount to an increase in per capita expenditures of 130 per cent from $30.42 to $70.07, followed by a decrease of 35 per cent to $45.77 per capita in 1973.[23]

2. Public Works Expenditures

Included under this heading are all capital

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[22] *Ibid.*, Tables D-5 and D-10.

[23] *Ibid.*, Tables D-5 and D-6.

expenditures on roadways and bridges, sewers, parks and recreation, civic centre developments, the Royal Alexandra Hospital and all other public capital improvements. Between 1946 and 1956, the public works expenditures rose from \$1,078,000 to \$21,071,000. Although expenditures had fallen to \$13,687,000 in 1960, they rose to \$20,884,000 in 1961. In 1963, a sum of \$14,965,000 was spent on public works--72 per cent of the 1961 total. In per capita current dollars, public works expenditures rose from \$44.87 in 1946 to a peak of \$94.07 in 1956--an increase of 110 per cent. Since 1956, per capita expenditures have fallen. In 1963, expenditures were \$49.27, 56 per cent of the 1956 total and only 10 per cent above the 1946 total.[24]

In the following sections a more detailed breakdown of public works expenditures during the 1946-1963 period will be made.

a) Capital Expenditures on Roadways and Bridges

This category includes all capital expenditures on asphalt surfacing, grading and gravelling, standard paving, bridges, underpasses and overpasses. Since 1946,

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[24] Ibid., Tables D-1, D-3, and D-4. In terms of constant 1961 dollars, the peak year is still 1956 with capital expenditures of \$103.48 per capita, while the 1963 expenditures of \$47.30 per capita are 23 per cent below the 1946 expenditures of \$61.47.

$57,875,000 have been spent on these improvements. After 1946, when $356,000 was spent, this category increased until in 1963 the city expended $4,783,000. The peak year was 1957 when $5,672,000 were spent. From 17.5 per cent of total public works in 1950, this category increased to 33.4 per cent in 1952, then declined to 20.4 per cent in 1956. It recovered to 36.3 per cent in 1960 and in 1963 was 32.0 per cent of total public works.[25]

It is anticipated, on the basis of a projection of expenditures over the past ten years, that capital expenditures on roads and bridges will increase from $5,636,000 in 1964, or $17.93 per capita, to $8,540,000 in 1973, or $19.93 per capita. For the total ten year period, it is expected that $70,900,000 will be expended on this category, with a steady increase annually except for years in which major bridges will be constructed. This will represent an increase in roadway and bridges capital expenditures from 24.3 per cent of total public works in 1964, to 25.5 per cent in 1973.[26]

In the next ten years, as population and automobiles per capita increase, capital expenditures on streets, expressways and bridges will rise in per capita terms. The

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[25] Ibid., Tables D-11 and D-13.

[26] Ibid., Table D-5.

tentative estimates contained in the Metropolitan Edmonton Transportation Study indicated a total outlay of $115,000,000 on freeways and bridges up to 1980. For all provincial highways and bridges within the city, the provincial government will contribute 50 per cent of the capital costs. The demand for paved roads and the high initial cost of serving low density suburban areas will increase costs faster, as will the cost of purchasing the right-of-way for expressways through built-up areas. In some cases, 50 per cent of the right-of-way costs to the city may be recovered from the federal government, if the area is part of an urban renewal program.

b) Capital Expenditures on Sewers

Sewers can be classified into the following types: (1) sanitary sewers which handle liquid wastes; (2) storm sewers which handle storm water; and, (3) combined sewers which handle runoff of both sanitary wastes and storm waters. The first sewers installed in Edmonton were of the combined type. Since World War II, however, the systems installed have been separated into sanitary sewers and storm sewers. Most of the existing sewers and those being designed operate on a gravity flow basis, due to the particular topography of the city. This eliminates the need for pumping stations to handle flows from large areas. The total number of miles of

sanitary, storm and relief sewers has increased from 152 miles in 1920 to 1,031 miles in 1962, while sewer service connections have increased from 9,986 to 90,012.

The first sewers constructed in the city discharged their wastes directly into the river without treatment. The sewage outlets were always downstream from the point of water supply intake. In 1914/15, the first sewage treatment plant was constructed to handle these wastes. Since then, five more plants have been constructed, the main sewage treatment plant being completed in 1957 at a cost of $4,261,000.

Capital expenditures on sewers have totalled $60,616,000 over the period 1946 to 1963.[27] From an annual amount of $224,000 in 1946, expenditures rose to the all time high of $7,355,000 in 1957, then declined to $3,644,000 in 1963. As a percentage of total public works, they fluctuated from a high of 37.1 per cent in 1958 to a low of 14.1 per cent in 1961. In 1963, capital expenditures on sewers were 24.3 per cent of total public works, or slightly below the fourteen year average of 27.7 per cent.[28]

Most of the main sewer conduits have been

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[27] The cost of the aforementioned sewer plants have been included under miscellaneous public works in Table D-1.

[28] Appendix D, Tables D-11 and D-13.

constructed and in the next twenty years additional construction is likely to be concentrated first in the north-east and north-west, then the south and south-east, then the south-west, and then west of Jasper Place. It is estimated that expenditures on sewer construction will remain at about $4,000,000 per year for the next ten years, declining in terms of per capita capital expenditures.

c) Capital Expenditures on Other Local Improvements

This category includes capital expenditures on boulevards, sidewalks, curbs, watermains, intensified lighting, spur track, railheads and underground wiring. In the period between 1946 and 1963, approximately $46,451,000 was spent on such improvements.

From 1946, when other local improvements totalled $329,000, expenditures increased to $4,315,000 in 1959, then declined to $2,777,000 in 1963. As a percentage of total public works, this category has fluctuated from a high of 33.8 per cent in 1950 to a low of 15.0 per cent in 1954, and in 1963 was 18.6 per cent.[29]

During the next ten years, capital expenditures on this category are expected to increase in per capita terms largely as a result of increased expenditures on curbs,

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[29] *Ibid.*, Table D-11.

sidewalks and underground wiring.

d) Capital Expenditures on Parks and Recreation

This category includes expenditures on community leagues, libraries and the City Zoo, in addition to park facilities. Capital expenditures increased from $47,000 in 1946 to $968,000 in 1963. The peak year was 1958 when $1,377,000 was expended. The total capital expenditure on parks and recreation for the eighteen year period was $9,547,000.[30]

In the next ten years, expenditures on this cagetory are expected to increase substantially. There seems to be a greater emphasis placed on good parks and recreation facilities; and the proposed new main Centennial Library and the expansion of the City Zoo will be of considerable cost.

e) Capital Expenditures on Civic Development

This category includes capital expenditures on the City Hall, the City Garage, the Civic Centre, land and building purchases and city planning. Since 1946, over $7,463,000 has been spent on such improvements. There has not been a steady increase in annual expenditures. The construction of the new City Hall in 1955/56 resulted in an

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[30] Ibid.

average annual expenditure of $1,444,000 for those two years, while the average expenditure over the whole period was $415,000 per year. Since 1961, however, capital expenditures have averaged $792,000 annually.[31]

In the next ten years, civic centre development will insure at least $600,000 of capital expenditures annually in this category. Land and building purchases for city planning purposes will also more than likely increase considerably.

f) Capital Expenditures on Protection

This category includes the Fire Department, the Police Department and the courts. Over $4,828,000 has been expended on capital improvements in this category since 1946. While the average annual expenditure has been $268,000, there have been wide fluctuations in yearly expenditures from $4,000 in 1955 to $1,050,000 in 1961. The average for the last three years has been $882,000, but this has been caused by the construction of the new police building and the renovation of police courts.[32]

In the next ten years, capital expenditures on this category are not expected to increase. They should remain approximately stable with the major part of the new

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[31] Ibid.

[32] Ibid.

expenditures going for new fire halls.

g) The Royal Alexandra Hospital

In the past eighteen years, more than $17,190,000 has been spent on capital improvements for the city hospital. However, 52.2 per cent of this total was expended on new buildings during the two years 1961 and 1962. Another 15.7 per cent was spent during 1958/59, also on new buildings.[33] The provincial and federal governments provide the funds for capital expansion, and also pay the debt service, although the city administers the expenditures. Major expenditures in the near future include $1,850,000 on a new pediatrics wing.

h) Miscellaneous Capital Expenditures

Included in this category are all capital expenditures which do not usually recur, such as those on the municipal airport, the incinerator, the sewage treatment plants, Clarke Stadium, the Planetarium and Renfrew Park. Also included are capital expenditures on traffic lights and other public works.

Over $17,539,000 has been spent on such improvements in the past eighteen years; approximately $974,000 annually. As in the case of the hospital expenditures, there have been wide fluctuations from year to year. Only $74,000 was spent

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[33] Ibid.

on this category in 1959, while in 1956 over $3,400,000 was expended.[34]

In the next ten years, this category is expected to continue to fluctuate. Major expenditures will likely be confined to new airport runways and traffic lights.

Taken altogether, capital expenditures on public works are expected to amount to over $283,674,000, on the basis of the trend exhibited in the past ten years projected over the next ten years. From an estimated $23,217,000, or $74.82 per capita in 1964, they could rise to $33,518,000, or $80.25 per capita, in 1973. As a percentage of total projected capital expenditures, public works expenditures are likely to decline from 58.7 per cent in 1964 to 53.8 per cent in 1973, due to the large expected capital outlays by the public utilities.[35]

Of special note is the fiscal role of the property share of local improvements. The property share of local improvements is that portion of public works which must be paid for by the property owner adjacent to such improvements. Thus the property owner pays for part of the expenditures on roads, sewers, curbs, and boulevards, plus all of the expenditures on watermains and intensified lighting.

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[34] _Ibid._

[35] _Ibid._, Tables D-5, D-6, and D-7.

The property share of local improvements has increased from $305,000 in 1946 to $6,354,000 in 1963. The peak year was 1962 at $7,657,000. As a percentage of total public works, the property share of local improvements increased from 30.7 per cent in 1950 to 42.5 per cent in 1963.[36] This would seem to indicate that the property owners will bear more of the burden of local improvements in the future.

3. Capital Expenditures on Schools

Included in this category are all capital expenditures on land and buildings made by the two city school boards. These expenditures have been steadily increasing over the years from $527,000 in 1946 to $6,733,000 in 1963. The peak year was 1957 when $8,129,000 was expended. The total expenditure for the eighteen year period amounted to over $73,804,000 or 17.5 per cent of the total Edmonton municipal and school capital expenditures. The annual percentage varied from 22.1 per cent in 1951 to 11.2 per cent in 1961. In per capita current dollars, school capital expenditures increased 150 per cent from $13.60 in 1950 to $34.10 in 1957, then declined 35 per cent to $22.17 in

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[36] Ibid., Tables D-11 and D-13.

1963.[37]

In the next ten years, per capita school capital expenditures are expected to remain approximately the same at $21.50. In 1964, this would amount to a total capital expenditure of $6,797,000, rising to $9,169,000 in 1973.[38] This increase in capital expenditures for the provision of school facilities is expected because demographic studies indicate that a greater percentage of an ever increasing population will be in the school-age bracket in the next ten years. Furthermore, the demands of our competitive and complex society are for highly trained persons and, because of these demands, a greater percentage of the school-age population will be attending school and will be attending for a greater length of time.

4. Forecast Municipal and School Capital Expenditures

In the foregoing sections the various categories of capital expenditure have been discussed with regard to past expenditures and have been projected on the basis of past trends to determine future prospects. The object of this

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[37] *Ibid.*, Tables D-2, D-3, D-4, and D-12. In per capita constant 1961 dollars, however, the rise was only 96 per cent, from $18.63 in 1950 to $36.49 in 1957; the decline was 42 per cent to $21.28 in 1963.

[38] *Ibid.*, Tables D-5, D-6, and D-7.

section is to consolidate all these expenditures in order to give the reader an idea of their magnitude. It is estimated that municipal capital expenditures will increase from $32,780,000 in 1964 to $53,131,000 by 1973. The total for the period would be $462,954,000. With the addition of school capital expenditures, total 1964 expenditures become $39,577,000, or $126.86 per capita. By 1973, the total is estimated at $62,300,000, or $147.42 per capita. In per capita terms, both of these capital expenditures are less than the per capita expenditures in 1957, reflecting the smaller rate of growth in population. The total capital expenditure for the ten year period, including school capital expenditures of $79,527,000, is expected to be in the order of $542,481,000.[39]

B. Application of a Capital Budget

Because of the magnitude of the estimated capital expenditures forthcoming in the next ten years, a capital budget should be introduced so as to attain the utmost value for each expenditure dollar. In practice, a capital budget is usually presented in a separate section of the annual budget. The city commissioners, department heads and additional organizational entities, such as the City Planning

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[39] Ibid., Tables D-5 and D-6.

Department, are typically involved in budgeting for capital items. Frequently the capital budget is linked with the operating budget in summary statements. Each capital expenditure is or should be supported by a statement of need, a statement of cost and usually by a statement of anticipated performance--that is, intended accomplishment.

The procedures for capital budgeting in municipalities are not at all uniform. Nevertheless, certain generalized steps may be outlined:

a) The procedure of capital budgeting begins with a long-range physical improvements plan which seeks to look ahead from ten to twenty years and chart the growth of the community in broad terms. The City of Edmonton has advanced considerably towards this goal of a long-range plan with the publication of the Metropolitan Edmonton Transportation Study and the Draft General Plan of the City of Edmonton.

b) Once the budgeting phase is initiated, the planning process starts with a listing of all needed or desired public improvements. These are proposed by department and agency heads within the city government. In addition, civic organizations, charitable organizations, and other groups transmit suggestions to the city planning commission or some other officially designated group. The planning commission must screen the proposals, investigate costs and establish a

priority list. Suggested criteria for the evaluation of each proposed project are as follows: (1) the necessity of the project for the safety, health and convenience of the general public, and the number of citizens it will serve; (2) the economic, social, cultural and aesthetic benefits that the project will yield to the city; (3) the contribution of the project to the physical conservation and the value of the area in which it is to be located; (4) the conformity of the project to the plans of the city planning department; (5) the coordination of the project with other projects proposed by various city departments as well as by other public and private agencies (for example, an improvement that might enhance values in the fringe areas may destroy many times those values in the central core area); (6) the financing of the project from funds now available or expected to become available during the program period, and the effect of the project on various operating budgets; and, (7) the additional financing necessary to construct the improvement within the limits of a reasonable municipal debt to be paid through an orderly system of debt retirement.[40]

c) A financial analysis of the city's revenue and

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[40] Chicago, Department of City Planning, Capital Improvement Program Division, Capital Improvements Program, 1961-1965, (Chicago, Illinois, 1961), pp. 7-10.

expenditure requirements, present and anticipated, must be prepared. This is customarily the responsibility of the city finance officer, or the city budget officer. Sometimes the planning department prepares the financial analysis as well as establishing the priority list.

d) The financial analysis must be coordinated with the priority list of projects. This may be the responsibility of the city financial officials or of the city planning department.[41] Such coordination is frequently a complex matter, since it may involve not only the city, but also the other governmental units operating within the district and it requires careful examination of the specific projects, such as special assessments for streets and sidewalks, user charges for sewage, and provincial and federal aid for housing, airports, or slum clearance. On the basis of these considerations, the priority list is revised preparatory to incorporating the capital improvements program in the annual budget.

e) The first year's total of capital improvement projects is then incorporated into the annual city budget. These

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[41] It is argued that planning must become involved in financing if it is to be realistic. See: Frank Lombardi, "The Planning Agency and Capital Improvement Programs," Journal of the American Institute of Planners (Spring, 1954), pp. 95-101.

projects will most likely be brought under further review by the budget officer, the mayor and the city council, and may often be modified. The relation of capital projects to the city's operating budget must be examined at this point to assure that funds are available for maintenance and operation of capital facilities once they are constructed. In succeeding years, the plan is extended by one year, and the list of priorities from the previous year becomes the starting point for a re-examination of projects in relation to the development of the community and for modifications in the six-year plan. In some cities the basic physical plan is also subject to a thorough re-examination every five or six years. Maintaining citizen interest in planning and capital budgeting depends heavily on their periodic participation in the procedure and also on the manner in which city officials present the capital improvements plan and budget to the council and the public.

That part of the capital improvements program which makes up the annual capital budget is usually set forth in a separate section of the city's budget document, with summary tables showing the distribution of projects by function and department. The summary tables also show estimated future costs for projects. The capital budget also includes a summary of the source of funds. In terms of budget

classifications, the critical schedule is the one which shows the relationship between the project and the annual budget.

Capital budgeting has one disadvantage; the technique has come to be closely associated with a financial program for borrowing for public improvements. The technique, however, is inherently neutral with respect to the method of finance and does not require that outlays be financed by debentures. It is possible for a municipality to set aside a specific sum from current taxes each year to be applied to capital improvements. Nevertheless, a number of cities that are strongly addicted to pay-as-you-go for capital improvements avoid the use of a capital budget for fear that it will involve them in loan finance. Conversely, cities which are growing rapidly utilize the capital budget for the very reason that it expedites their borrowing programs.[42]

With its emphasis on procedures for decision-making and financial analysis, the capital budget as used in cities does not reflect any careful effort to define capital or capital improvement. The criteria are rough and are phrased

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[42] Fred W. Lawrence, "The Capital Improvement Program--A Challenge to a Small City", Municipal Finance (May, 1954), pp. 144-148.

in such terms as large size, long life, fixed nature, or non-current. Capital budgeting becomes construction budgeting or public works budgeting with a strong emphasis on the engineering aspects. In fact, the advantages of capital budgeting include the regularization of the designing phases in a municipality and improved engineering for projects. The time span is extended for the preparation of surveys, plans, and specifications, and for the acquisition of land for public improvements.

Insofar as the two may be separated, capital budgeting in municipalities emphasizes planning, not budgeting. It is a highly useful technique for centering attention on a class of expenditures which are difficult to evaluate and finance. For the City of Edmonton, a capital budget program will provide a means of assuring that projects will be executed in accordance with predetermined priorities of need as well as the ability of the community to pay.

The following chapter will deal with that aspect of municipal finance which is affected by a large demand for capital improvements, that is, the municipal debt.

CHAPTER V

THE MUNICIPAL DEBT

The rapid growth of the city's debt since the war has caused much concern amongst the city councils, property owners and the provincial government. The questions that this chapter will attempt to answer are: (1) Is the municipal debt too high for the taxpayer to bear? (2) What are the possibilities of reducing the debt or at least maintaining it at a constant per capita level? Before proceeding to these questions, the reasons and justifications for borrowing will be analyzed.

A. Justifications for Borrowing

Many justifications have been presented, some valid and some invalid, for using borrowing as a source of funds for a local government. The most commonly accepted argument is that long term borrowing should be used in conjunction with capital expenditures. This provides the means by which the cost of a particular governmental expenditure can be related to the benefit from that expenditure.

Certain types of outlays give rise to benefits for an identifiable group of persons as in the case of benefits derived from the construction of a sewage system or the laying of sidewalks. Here it is generally felt that the most equitable method of financing such long-term projects is by special levies against the property owners who directly benefit from the expenditure. To collect such a levy in a single lump sum, however, may impose an unduly harsh burden upon these taxpayers. Consequently, the city may borrow for the purpose of spreading the cost over time in a series of less burdensome payments. For the same reason, borrowing may be justified where the benefits from some capital expenditures may not be assignable to any specific taxpayer, but accrue to all within the community, as in the case of schools, city hall or police station.

An additional justification for borrowing to finance expenditures of general benefit is that the benefit is spread over long periods of time. Borrowing is also a means by which self-supporting public enterprises can be constructed or acquired. These include not only utilities, but also such activities as the airport and some recreational facilities. The distinctive feature of such public enterprises is that their services are generally provided in exchange for "user charges." Long-term and short-term

borrowing have also been justified during emergencies, such as floods, or where substantial savings may be achieved by refunding operations. In all cases the particular debt obligation, that is, the kind of bond, depends on the nature of the borrowing opportunities and the legally authorized and economically feasible alternatives.

Short-term borrowing is used to finance expenditures which must be made prior to the time that normal current tax revenues are received, or to acquire funds immediately for a project which is to be financed ultimately by long-term bonded indebtedness.

These are the valid reasons for borrowing by the city, but there are circumstances in which borrowing should not be used as a source of funds.[1]

B. Arguments Against Borrowing

There is no justification for local government borrowing to meet current expenditures, the exception to this being the emergency circumstances noted above. Borrowing for current expenditures is inherently wasteful in that it incurs future additional costs with no related future additional benefits. Furthermore, the incurring of debt for

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[1] Seymour Sacks and W.F. Hellmuth, Jr., Financing Government In a Metropolitan Area: The Cleveland Area Experience (Glencoe, Illinois: Free Press, 1960), p. 277.

this purpose almost inevitably leads to financial difficulty. If a local government is unable to meet the costs of current expenditures from current tax revenues or other available current sources, the solution is to curtail current expenditures or find new revenue sources.

A second instance when increasing long-term debt is not justified is at the stage where existing debt is already too high relative to the available fiscal resources. The incurring of additional debt would mean that taxpayers would be faced with a serious curtailment of municipal services or, alternatively, an unacceptable additional tax burden to service the debt.

A third circumstance under which the use of borrowing may be both undesirable and unnecessary exists in the case where capital requirements follow a regular pattern of substantial magnitude. When this is the case, it is possible to achieve the advantages of borrowing as a method of relating cost to benefit without incurring the cost of borrowing, the interest costs. This is done through the use of a pay-as-you-go system of financing capital outlays. Every year a certain portion of tax revenues are allocated for capital expenditures or placed in a "capital fund," and capital outlays are made from this fund. Through the use of capital budgeting, the cost to the taxpayers is spread over

time, but because no actual borrowing takes place there is no interest to be paid. However, the current tax levy will undoubtedly be higher than if debt financing was partially used. It should be stressed that such a system, while highly desirable, is feasible only when capital outlays follow a regular pattern and is desirable only when the yearly levy for capital purposes is maintained at a rate sufficiently high to insure that the desired level of expenditures is maintained. Furthermore, the virtues of a pay-as-you-go system should never be the controlling factors of expenditures if the preservation of the system necessitates the avoidance of needed expenditures.[2]

C. Statutory Debt Limitation

In addition to the limitations imposed on borrowing by the community's ability-to-pay and debenture market conditions, there are also statutory debt limits embodied in "The City Act" which states in section 630:

> 1. The amount of the debenture debt of a city outstanding at any time shall not exceed twenty per cent of the total amount of the assessment of ratable property as shown on the last revised assessment roll and exclusive of: (a) debts incurred by the board of trustees of any school districts of which the city is a part (b) debts incurred for local improvements to the extent to

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[2] *Ibid.*, p. 278.

> which the amounts are secured by special assessments; and, (c) debts on behalf of the public utilities of the city.
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> 2. The amount of any funds or securities held in the sinking fund, to the extent required for redemption of the outstanding debenture debt of the city issued on the sinking fund plan of repayment, shall be deducted in calculating the total amount of the debenture debt of the city outstanding at any time.

Furthermore, a debenture issue shall not be issued whose maturity date exceeds forty years from the date of issue.

For purposes of general borrowing, "The City Act" allows the deduction of the sewer system capital debt in the calculation of the amount of the gross general borrowing power. The sewer system debt approximates 60 per cent of the total general and sewage debt. In Table 14 it can be seen that the city has a wide margin of borrowing power before the statutory limit is reached.

It will be noted that in 1962 the total net assessment increased 53 per cent. This was due to the implementation of the new provincial assessment standards and resulted in a decline to 7.04 per cent of the general debt assessment ratio.

D. Measurement of the Municipal Debt

Associated with the debt concept are the various measures which can be employed in an examination of the

TABLE 14

MUNICIPAL DEBT LIMITATION
THE CITY OF EDMONTON
1956-1963[a]

Year	General Debt (in $'000)	Net Taxable Assessment (in $'000)	Debt as a Percentage of Assessment
1956	$17,717	$255,152	6.94
1957	21,068	272,492	7.73
1958	21,505	293,184	7.33
1959	24,481	313,093	7.82
1960	26,698	331,112	8.06
1961	34,081	341,368	9.98
1962	36,841	523,380	7.04
1963	37,229	568,361	6.55

[a]Source: The City of Edmonton, Financial Statements and Reports, 1956-1963.

pattern of outstanding debt and the distribution of the cost or burden of meeting the financial obligations imposed by its existence. The selection of specific measures of indebtedness is dictated both by the use for which the measures are intended and by the availability of data.

Gross or total debt figures are available, but are useful only as an indication of the general magnitude of indebtedness. In addition to the fact that it restricts comparability, the gross measure neglects the existence of sinking funds which represent debt already repaid, so that failure to take this into account in a gross debt measure

results in an overstatement of the actual debt obligations of the community.

Per capita debt has the primary advantage of permitting comparison over time because population represents a common denominator. It has limitations, however, primarily because it neglects the fact that financial ability varies over time and between governments at a given time independently of population.

Debt as related to the income or wealth of those who must meet the cost of debt service[3] is a good measure of relative debt in that ultimately the cost of debt must be met from some combination of income flows, the store of wealth, or the command over economic resources of those who collectively incur indebtedness.

In many ways, debt as a percentage of assessment is a good measure of ability-to-pay. This measure does not completely eliminate the problem of comparison over time, because the relation of assessed value to true or market value of property may vary over time especially if they are many years apart. A prime example can be seen in Table 14 when the basis of assessment was changed in 1962. Moreover, assessed value does not reflect the community's ability to meet the costs resulting from the existence of debt.

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[3] Annual cost of repayment of principal and interest.

However, debt service is initially distributed on the basis of assessed valuation, and debt as related to assessed valuation is the most commonly employed measurement of debt. This is the view taken by both potential lenders and potential borrowers.

The existence of bonded indebtedness places a dual burden upon taxpayers. Repayment will occur over time and an additional expense is incurred for this privilege. Therefore, the payment in any single year is comprised of both repayment of part of the principal, and also the payment of interest. The total of both of these is called "debt service." In any one year, the sum of these two amounts can have any one of a variety of relationships to the original amount borrowed, depending upon the terms of the debt obligation.

Debt service as related to assessed valuation is a measure of the burden of debt. It differs from the overall net debt as related to assessed valuation in that it is an indication of the burden of debt without regard for time. The net debt shows nothing, by itself, of the actual degree to which the existence of debt places a direct monetary burden upon taxable property; it is a general indicator of the amount of debt which must, over some time period, be redeemed by taxes upon each dollar of assessed value. By

contrast, debt service as related to assessed value is a measure of the amount of this overall net debt burden which is being paid by taxes upon property in a single year. Table 15 indicates debt service as related to total net debt and total net assessment.

TABLE 15

DEBT SERVICE OF THE
CITY OF EDMONTON
1946-1963[a]

Year	Debenture Debt Charges (in $'000)	Debt Charges as a Percentage of Total Municipal Debt	Debt Charges as a Percentage of Total Net Assessment
1946	$ 1,205	7.29	1.56
1951	1,673	4.12	1.24
1956	4,857	5.91	1.90
1957	5,827	5.86	2.14
1958	7,320	6.40	2.50
1959	8,275	6.60	2.64
1960	9,103	6.79	2.75
1961	9,426	6.51	2.76
1962	10,511	6.68	1.93
1963	11,009	6.82	1.94

[a] Source: The City of Edmonton, Financial Statements and Reports, 1946-1963.

Some communities with relatively heavy overall debt as of any period may have a very low burden as measured by debt service if the debt is generally of long maturity. On the other hand, there are communities which have a

relatively low burden in terms of overall debt, but a high burden in terms of debt service due to the fact that the debt is either being amortized very rapidly or is of short maturity.

The municipal debt of the city varies as to the interest rates which apply. As of December 31, 1963, there was $53,979,273 of debt subject to rates ranging from 2.0 per cent to 3.875 per cent, $26,469,711 subject to rates between 4.0 and 4.75 per cent, $76,065,502, subject to rates between 5.0 and 5.75 per cent, and only $5,897,731 bearing a 6.0 per cent interest rate.[4]

E. Analysis of the Municipal Debt

In this analysis of the city's debenture debt, it is necessary first of all to consider what debt is being analyzed. The first type of debt to be studied is self-supporting debt. This category includes the debt incurred by the five utilities and the local improvement debt incurred for the property owners by the city. The utilities repay their debt out of revenue and thus the cost of debt service is not placed on the property tax. Local improvements property share debt is paid by the property owners whose

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[4] Appendix E, Table E-6.

property has been improved by public works assignable to their property, and this again does not fall upon the general property tax.

The second type of debt is that incurred by the city to finance general public works and sewers. All of this debt is repaid from general revenue. This type of debt and the debt incurred by the school boards affect taxes. The net school debt is included although it is not a charge upon the city as a corporation. The total gross debt of the city plus the total net debt of the school boards increased from $20,200,000 in 1946 to $196,400,000 in 1963. The debt steadily increased over the period in question. In per capita current dollars, the increase was 268 per cent from $175.52 in 1946 to $646.51 in 1963. The per capita debt increased in every year except 1963, when it declined $0.97 per capita from $647.48 in 1962--the peak year.[5]

There are many reasons for the growth of the debt. Firstly, the rapid rate of population growth since the war has necessitated large capital outlays. Secondly, during the depression and the war, little maintenance and few capital improvements were carried out and a backlog of deferred

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[5] _Ibid._, Tables E-2, E-3, and E-4. In terms of constant 1961 dollars, a similar situation appears; the increase being 94 per cent from $319.45 per capita in 1946 to $620.65 per capita in 1963.

public works accumulated. Thirdly, post-war inflation has exaggerated the size of the debt relative to prior years. Fourthly, there are more improvements of a higher standard being provided. And fifthly, all of these improvements are expected more quickly by the public than was the case in the past. There is no evidence of city extravagance or irresponsibility; the tremendous post-war expansion in the province has fallen heavily on the city and is reflected in its growing debt.

Evidence submitted to the McNally Royal Commission in 1954 showed Edmonton to have the highest per capita debt of the main cities in Canada, and since then the per capita debt has increased 62 per cent.[6] As a result of the debt, however, the city has many new physical assets. There is the argument that future generations should contribute to capital expenditures, but this policy can be carried too far. A point is reached where the cost of debt outweighs the future benefits from the capital expenditures. In 1963, more than one out of every five revenue dollars was spent on servicing the debt. The cost of servicing the debt would have been greater had the provincial government not established the Alberta Municipal Financing Corporation through

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[6] Royal Commission on the Metropolitan Development of Calgary and Edmonton, Report (Edmonton: Queen's Printer, 1956), p. 367.

which the city obtains lower interest rates on debenture debt. This corporation sells the debenture issues of the municipalities in the province at a lower interest rate than could ordinarily be obtained by the municipalities because of the greater borrowing powers of the province. This corporation presently holds approximately 54 per cent of the city's municipal debt.[7]

A more detailed study of the three major categories of debt will result in a better understanding of the debt burden of the city.

1. Self-Supporting Debt

This category includes all debt financed by utility revenue and by special frontage taxes levied on property owners. Between 1946 and 1963, self-supporting debt increased from $3,890,000 to $79,553,000. In current dollars this represented a per capita increase from $33.83 to $261.90.[8] The six types of debt included in this category are as follows:

a) Local Improvements Debt (Property Share)

The debt incurred by the city in order to finance

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[7] Appendix E, Table E-7.

[8] Ibid., Tables E-1, E-3, and E-4. In terms of constant 1961 dollars, the per capita increase was from $61.57 to $251.42.

local improvements, such as sidewalks, curbs and watermains, that are assignable to specific property is repaid solely from special frontage taxes. This debt has increased from $843,000 in 1946 to $32,400,000 in 1963. The increase has been very steady and has been due to the city policy of having the property owners benefiting from a specific improvement bear the costs of such capital improvement. Where applicable, this policy would assist in removing future debt increases from the general debt category financed by general revenue to semi-private debt.[9]

b) Electrical Distribution System Debt

The debt incurred by this system (and all utilities) is repaid entirely out of reserve funds built up from operating revenue. It has increased from $263,000 in 1946 to $13,186,000 in 1963. As mentioned in Chapter III, this system expects to issue from $47,200,000 to $55,100,000 in new debentures during the next ten years.[10]

c) The Power and Water Treatment Plant Debt

This plant's debt increased from $860,000 in 1946 to $6,079,000 in 1963. This was not a steady increase. The power plant debt rose to $1,710,000 in 1948, then fell to

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[9] *Ibid.*, Table E-1.

[10] *Ibid.*

$351,000 in 1956. Since then, it has risen very rapidly to a high of $6,265,000 in 1962.[11] Over the next ten years, the power plant expects to borrow $10,687,000 for further capital expansion.

d) The Edmonton Transit System Debt

The total debt of this system has tended to fluctuate to some extent. From $339,000 in 1946, it rose to $2,390,000 in 1951, then fell to $1,334,000 in 1960. Since then it has increased to $2,969,000 in 1963. It is expected that transit system debt will increase as borrowing will most likely be required to finance future capital expansion.[12]

e) The Edmonton Telephone System Debt

This system's debt has increased steadily from $476,000 in 1946 to $19,816,000 in 1963. It has the highest outstanding debt of all the utilities.[13]

f) The Waterworks System Debt

The debt incurred by the waterworks system increased from $1,110,000 in 1946 to $4,531,000 in 1951. Since 1951, the system's debt has remained at approximately this amount,

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[11] *Ibid.*

[12] *Ibid.*

[13] *Ibid.*

first declining, then increasing after 1957. In 1963, the outstanding debt of the waterworks system was $4,928,000--only 9 per cent higher than in 1951 in terms of current dollars.[14]

2. General and Sewage Debt

In addition to the debt of the sewer system, this category includes all debentures issued for the purpose of financing the construction of roads, bridges, parks and recreation areas, traffic lights, fire alarms and equipment, police equipment, etc. All debt within this category is repaid through tax revenue.

Between 1946 and 1963, general and sewage debt increased from $12,644,000 to $81,953,000. This represented an increase, in terms of current dollars per capita, from $113,60 to $269.80. The peak year for the general and sewage debt was 1961, when the debt reached $281.24 per capita.[15]

Before 1956, the available statistics did not indicate the division between general debt and sewage debt.

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[14] Ibid.

[15] Ibid., Tables E-2, E-3, and E-4. In constant 1961 dollars terms, the per capita increase was from $206.75 in 1946 to $259.01 in 1963. In constant dollars, this debt did not exceed the 1946 figure until 1957, when it was $243.73.

Since 1956, however, these two categories have been listed separately. Between 1956 and 1963, the general debt had increased from $17,717,000 to $37,229,000. In current dollars per capita, the increase was from $79.09 to $122.56. The peak year was 1962 at $124.90 per capita.[16]

The sewage debt is larger than the general debt and increased from $23,792,000 in 1956 to $44,724,000 in 1963. In current dollars, the sewage debt increased from $106.21 per capita in 1956 to $147.24 per capita in 1963. The peak year in this case was 1959, and the sewage debt per capita has been decreasing ever since that high of $163.54.[17]

In the future, the sewer system debt is likely to decline in per capita terms because of the fact that already existing capital facilities are supplying most of those areas in which growth is expected to occur, with the exception of the extreme south-west and north-east. Most of any new debt will likely be incurred by the need for reconstructing old, worn out facilities.

The general debt, on the other hand, is likely to increase substantially. If the population does grow as

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[16] Ibid. In constant 1961 dollars, the increase was from $87.00 to $117.66.

[17] Ibid. In terms of constant 1961 dollars, sewage debt per capita increased from $116.83 in 1956 to $166.81 in 1959, then decreased to $141.35 in 1963.

expected, there will be a need for bridges and freeways which, because of their long life and high cost, will necessitate the borrowing of large sums of money.

3. School Debt

The debt incurred by the Edmonton Public School Board and the Roman Catholic Separate School Board has been used to finance the construction of schools and the purchase of land for such schools. While this debt is not a financial obligation on the city as a corporation, it is an obligation of the taxpayers and property owners within the city.

The net school debt has risen steadily since 1946 when it was $3,646,000. In 1963, it was $35,050,000. In per capita current dollars, the increase was from $31.71 in 1946 to $115.39 in 1963. The peak year was 1959, when the per capita school debt was $124.76.[18]

In the future, it is expected that the school debt will continue to rise and will begin to increase again in per capita terms. This is anticipated because the large increases in school age children expected in the next ten years will necessitate the outlay of large sums of money

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[18] *Ibid.* In terms of constant 1961 dollars per capita, the net school debt increased from $57.71 in 1946 to $110.77 in 1963.

for new school construction and the replacement of older schools in the city.

F. Methods for Reducing the Rate of Growth of Debt

Concern has been expressed in local news media and in public discussions over the rapid increase in total municipal and school debt, and also the size of that debt expressed in per capita terms. Grim predictions of impending financial disaster have been made and yet the debt continues to increase on a per capita basis. The size of the debt itself is relatively meaningless unless its magnitude is expressed in relation to the size of income, total net assessment, and economic activity within the municipality. While this is true, it is also possible that per capita debt could be held constant by employing various measures.

One possible solution immediately suggests itself. This is the greater use of current revenue, in the form of reserves, as a source of funds. This implies some increase in the current levy and may not be considered desirable from a political viewpoint, or from the viewpoint of the taxpayer who contemplates his present tax bill rather than any savings that may accrue to him at some future date when he may not even reside in the city. The main advantage of the

pay-as-you-go system is that it avoids the cost of borrowing. Still, it must be remembered that the dollars used to repay debentures in the future will be worth less in terms of purchasing power than those received now from the debenture issue and, therefore, borrowing may be desirable. If the rate of inflation is high enough, the borrowing municipality may, in effect, benefit from a negative interest rate.

The pay-as-you-go system may still be used to advantage. Taxes in the city are not so high that more of a burden cannot be placed on the current levy. To determine whether the current levy is found overly burdensome by the taxpayers, an analysis of the current tax collections as a percentage of the total current tax levy is revealing. We have seen previously that taxes have been rising and that incomes have tended to keep pace with the increase in taxes over the past 18 years. During this period (1946 to 1963), total current tax collections have averaged 94.80 per cent of the total current tax levy. The range has been from 93.33 per cent in 1950 to 96.51 per cent in 1956. In 1963, the total current collections were 94.06 per cent of the total current levy.[19] These percentages are quite high for

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[19] Derived from: The City of Edmonton, Financial Statements and Reports, 1946-1963.

a tax collection. Further and more substantial evidence to indicate that taxes have not been too high are provided by comparing total collections in any one year to the total current levy in that year. Total collections differ from total current collections in that the former includes tax arrears and penalties from previous years. Total collections do not contain the proceeds of the sale of property for non-payment of taxes which, if included, would substantially increase the following percentages. Between 1946 and 1963, the average total collections were 99.93 per cent of the total current levy. The range was from 98.82 per cent in 1960 to 101.66 per cent in 1953. In 1963, the total collections were 99.70 per cent of the levy.[20]

Another partial solution could be the development of sub-divisions by private enterprise. If sub-divisions were developed in this way as a "package deal" with minimum standards set to insure the quality of the development, the city could avoid considerable capital outlay.

If the policy outlined in the above paragraph is not employed, then an extension of the policy of encouraging prepayment of local improvements could be followed. In conjunction with this, the proportion of local improvements borne by the property owner could be slowly but steadily

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[20] Ibid.

increased because the property should bear levies on improvements which enhance its value. In this way the owner can more readily see the value of the benefits accruing to his property.

We can now propose a tentative, but negative, answer to the first question posed at the beginning of this chapter, that is, is the municipal debt too high for the taxpayer to bear? We have seen that most of the municipal debt is of a self-supporting nature be it utility debt or local improvement debt. In 1963, self-supporting debt accounted for 49.4 per cent of the total municipal debt. We have also seen in previous chapters how incomes, assessments, and municipal revenue have grown along with the municipal debt. Tax collections indicate that the funds are forthcoming from the taxpayer to finance the debt, without much hardship being experienced.

G. Conclusion

Between 1946 and 1963, debenture debt sales averaged 62.33 per cent of municipal capital expenditures. In 1949 and 1951, there appears to have been some major refunding; therefore, only the period from 1952 to 1963 is taken to be representative of the debt financing of capital expenditures. Debt financing averaged 58.82 per cent in the latter time

period.[21]

In the projections of municipal capital expenditures, roughly 60 per cent of the expenditures have been estimated to be financed by debenture sales. Thus, of the total expected municipal capital expenditures of $463,000,000 over the next ten years, 60 per cent, or $278,000,000 is expected to be financed by debenture sales (mainly to the Alberta Municipal Financing Corporation), and the remainder by reserves and capital grants.

The anticipated rate of debt retirement would lower the total municipal debt by approximately $116,800,000 leaving the total municipal debt at approximately $322,000,000, or $752.00 per capita in 1973.[22] However, most of this increase in debt is expected to be of the self-supporting type, and it is also expected that the property owners will bear an even greater amount of local improvement debt in the future. Against this increase in debt, there must be offset the expected rise in incomes and wealth. While per capita debt has been projected to increase by about 47.5 per cent, per capita income is expected to increase by 32.3 per cent.[23]

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[21] Appendix E, Table E-5.

[22] Ibid., Table E-8.

[23] Appendix A, Table A-14.

CHAPTER VI

SUMMARY AND CONCLUSION

In the preceding five chapters, many aspects of municipal financing have been analyzed. The relationship between economic and population growth has been examined in order to determine the basis for Edmonton's rapid growth. Between 1954 and 1963, the population increased 54 per cent, while total income increased 107 per cent. On the basis of the growth in per capita income experienced over this period, a projection was made of the growth that may likely be expected over the period 1964-1973. The population has been projected on the basis of a 3.5 per cent compound rate that, if experienced, would increase Edmonton's population to 428,500 in 1973. From the projected growth in incomes and population, a total taxable income of $1,062,700,000 in 1973 was derived. This would be 94 per cent higher than the total in 1963, and would provide a sizable market for business activity.

Accompanying the rapid rate of post-war growth has been a great increase in current and capital expenditures.

These expenditures were necessary to maintain the economic growth of the city, and in turn were caused by the growth they maintained. While current expenditures are steadily increasing in per capita terms, capital expenditures depend, to a great extent, on the rate of growth in population. With the growth rate in population expected to be about 3.5 per cent per year over the next ten years, capital expenditures could be expected to decline in per capita terms. Because of the need for large expenditures on bridges, freeways, public utilities, and schools in the next ten years, this decline is not expected to be very great.

On the revenue side it has been shown that current revenues from taxes, "user" charges, licences and government grants have equalled current expenditures as a matter of city policy. Government grants are the only sources that have substantially increased their relative position, and are expected to maintain their importance over the next ten years. While the data assembled do not indicate that the property tax has become excessive in amount, three new tax sources were discussed that could broaden the tax base to a great extent to the relief of the property taxpayers per se.

It is in the area of debt financing that the next ten years are likely to differ from the previous ten years.

When the rate of population growth was high, capital expenditures were of such magnitude that the city could finance the outlays only by long-term borrowing. With the slower rate of growth expected in the next ten years, the per capita debt is anticipated to increase much more slowly than it did between 1953 and 1963. Because capital expenditures will still be of great magnitude, the municipal and school debt will still increase, but with incomes and assessments steadily growing at the same time, there can be no talk of impending fiscal disaster. The City of Edmonton is growing into a medium sized city, and taxes, expenditures and debt will not return to the levels of 1946, when the city was more of a large, dormant town. In the future, politicians and citizens must decide whether the problems of traffic movement, slums and lack of recreation areas that plague many large North American cities are to be avoided by planning, or whether these conditions will be allowed to develop until conditions have become intolerable and costs of redevelopment almost prohibitive. The city is not likely to become static in size and if it did, economic activity would likely decline rather than remain static or increase slowly. The citizens must decide whether it is worthwhile to spend more and more on improving their city through an orderly system of budgeting.

APPENDIX A

POPULATION AND INCOME DATA

TABLE A-1

TOTAL PERSONAL INCOME OF CANADA AND THE PROVINCES FOR SELECTED YEARS, 1926-1961[a]

(millions of current dollars)

Region	1926	1941	1946	1951	1956	1961
Newfoundland[b]	. .	. .	. .	$ 205	$ 311	$ 414
Prince Edward Island	$ 21	$ 23	$ 43	60	78	100
Nova Scotia	147	228	412	499	675	878
New Brunswick	108	148	284	383	497	630
Quebec	938	1,470	2,339	3,763	5,318	7,004
Ontario	1,537	2,494	3,738	6,093	8,617	11,405
Manitoba	295	343	594	881	1,126	1,361
Saskatchewan	357	272	641	1,106	1,226	1,095
Alberta	293	323	686	1,228	1,635	2,107
British Columbia[c]	318	511	922	1,568	2,332	2,947
Yukon and N.W.T.[d]	. .	. .	. .	21	43	46
Canada	$4,014	$5,851	$9,719	$15,824	$21,885	$28,049

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[a] Source: E. J. Hanson and I. C. Robison, Downtown Redevelopment Proposal (Calgary: City of Calgary--Canadian Pacific Railway, 1963), Table C-1, p. 207.

[b] Not available before 1949.

[c] Includes Yukon and N.W.T. before 1951.

[d] Not available before 1951.

TABLE A-2

PERSONAL INCOME PER CAPITA IN CANADA AND THE PROVINCES FOR SELECTED YEARS, 1926-1961[a]

(constant 1957 dollars)

Region	1926	1941	1946	1951	1956	1961
Newfoundland[b]	. .	. . .	. . .	$ 623	$ 775	$ 852
Prince Edward Island	$425	$ 442	$ 734	671	816	899
Nova Scotia	505	721	1,087	851	1,005	1,123
New Brunswick	482	592	954	814	927	993
Quebec	636	806	1,034	1,017	1,188	1,255
Ontario	858	1,204	1,465	1,453	1,649	1,724
Manitoba	815	859	1,311	1,244	1,369	1,392
Saskatchewan	768	555	1,236	1,458	1,440	1,115
Alberta	851	741	1,370	1,433	1,506	1,491
British Columbia[c]	909	1,119	1,441	1,475	1,725	1,705
Yukon and N.W.T.[d]	. .	. . .	. . .	921	1,434	1,172
Canada	$751	$931	$1,271	$1,241	$1,407	$1,449

[a] Source: E. J. Hanson and I. C. Robison, Downtown Redevelopment Proposal (Calgary: City of Calgary--Canadian Pacific Railway, 1963), Table C-2, p. 208.

[b] Not available before 1949.

[c] Includes Yukon and N.W.T. before 1951.

[d] Not available before 1951.

TABLE A-3

GROSS NATIONAL PRODUCT OF CANADA SELECTED YEARS, 1926-1962[a]

Year	Resident Population in Thousands	G.N.P. in Millions of Current Dollars	G.N.P. in Millions of Constant 1957 Dollars[b]	G.N.P. per Capita in Constant 1957 Dollars
1926	9,451	$ 5,152	$10,043	$1,063
1931	10,376	4,699	10,029	967
1936	10,950	4,653	10,622	970
1941	11,507	8,328	16,545	1,438
1946	12,292	11,850	20,212	1,644
1947	12,551	13,165	20,439	1,628
1948	12,823	15,120	20,821	1,624
1949	13,447	16,343	21,626	1,608
1950	13,712	18,006	23,118	1,686
1951	14,009	21,170	24,542	1,752
1952	14,459	23,995	26,501	1,833
1953	14,845	25,020	27,516	1,854
1954	15,287	24,871	26,711	1,747
1955	15,698	27,132	29,018	1,849
1956	16,081	30,585	31,508	1,959
1957	16,610	31,909	31,909	1,921
1958	17,080	32,894	32,284	1,890
1959	17,483	34,915	33,398	1,910
1960	17,870	36,254	34,144	1,911
1961	18,238	37,421	35,023	1,920
1962	18,570	40,401	37,195	2,003

[a] Source: E. J. Hanson and I. C. Robison, Downtown Redevelopment Proposal (Calgary: City of Calgary--Canadian Pacific Railway, 1963), Table A-10, p. 180.

[b] Current dollar figures deflated by the implicit price index for gross national expenditures.

TABLE A-4

PERSONAL INCOME PER CAPITA FOR CANADA AND WESTERN CANADA, SELECTED YEARS[a]

(millions of current dollars)

Year	Manitoba	Saskatchewan	Alberta	British Columbia	Canada
1926	$ 462	$ 435	$ 482	$ 515	$ 425
1931	317	155	272	453	348
1936	301	189	243	423	324
1941	470	304	406	612	508
1946	817	770	854	898	791
1947	828	758	884	951	827
1948	980	927	1,030	1,090	928
1949	958	957	1,008	1,120	940
1950	983	849	1,007	1,204	979
1951	1,135	1,329	1,308	1,335	1,130
1952	1,170	1,434	1,365	1,424	1,203
1953	1,166	1,319	1,357	1,467	1,235
1954	1,126	927	1,239	1,466	1,205
1955	1,191	1,164	1,292	1,528	1,257
1956	1,325	1,392	1,456	1,661	1,361
1957	1,313	1,158	1,426	1,698	1,396
1958	1,442	1,242	1,534	1,685	1,445
1959	1,486	1,291	1,544	1,743	1,486
1960	1,518	1,451	1,552	1,774	1,521
1961	1,476	1,184	1,582	1,796	1,538

[a] Source: E. J. Hanson and I. C. Robison, Downtown Redevelopment Proposal (Calgary: City of Calgary--Canadian Pacific Railway, 1963), Table C-4, p. 210.

TABLE A-5

PERSONAL INCOME BY COMPONENTS ALBERTA, SELECTED YEARS[a] (millions of current dollars)

Year	Wages and Salaries	Net Income of Farmers From Farm Production	Net Income of Unincorporated Business	Interest, Dividends and Net Rental Income	Government Transfer Payments	Total Personal Income	Per Capita Current Dollars
1926	$ 135	$ 98	$ 29	$ 26	$ 6	$ 293	$ 482
1931	132	10	25	23	10	199	272
1936	117	19	24	18	12	188	243
1941	171	64	39	25	11	323	406
1946	239	190	69	50	83	686	854
1947	323	213	80	57	59	729	884
1948	386	286	93	62	57	880	1,030
1949	438	234	102	60	61	892	1,008
1950	486	189	104	74	70	919	1,007
1951	562	398	108	93	71	1,228	1,308
1952	643	381	129	94	85	1,328	1,365
1953	751	300	127	103	95	1,373	1,357
1954	784	190	118	107	109	1,309	1,239
1955	839	197	135	122	118	1,410	1,292
1956	961	273	155	129	121	1,635	1,456
1957	1,029	181	162	137	152	1,660	1,426
1958	1,091	237	176	149	203	1,850	1,534
1959	1,168	228	179	168	198	1,927	1,544
1960	1,213	201	190	178	241	2,004	1,552
1961	1,293	208	194	186	247	2,107	1,582

[a] Source: E. J. Hanson and I. C. Robison, *Downtown Redevelopment Proposal* (Calgary: City of Calgary--Canadian Pacific Railway, 1963), Table C-5, p. 211.

TABLE A-6

ANNUAL PERCENTAGE CHANGE IN PERSONAL INCOME OF ALBERTA (CURRENT DOLLARS), 1945-1961[a]

Year	Wages and Salaries	Net Income of Farmers From Farm Production	Net Income of Unincorporated Business	Interest, Dividends and Net Rental Income	Government Transfer Payments	Total Personal Income	Total Per Capita
1945-46	18.4	53.2	15.0	16.3	107.5	22.7	23.4
1946-47	11.8	12.1	15.9	14.0	-28.9	6.3	3.5
1947-48	19.5	34.3	16.3	8.8	-3.4	20.7	16.5
1948-49	13.5	-18.2	9.7	-3.2	7.0	1.4	-2.1
1949-50	11.0	-19.2	2.0	23.3	14.8	3.0	-0.1
1950-51	15.6	110.6	3.8	25.7	1.4	33.6	29.9
1951-52	14.4	-4.3	19.4	1.1	19.7	8.1	4.4
1952-53	16.8	-21.3	-1.6	9.6	11.8	3.4	-0.6
1953-54	4.4	-36.7	-7.1	3.9	14.7	-4.7	-8.7
1954-55	7.0	3.7	14.4	14.0	8.3	7.7	4.3
1955-56	14.5	38.6	14.8	5.7	2.5	16.0	12.7
1956-57	7.1	-33.7	4.5	6.2	25.6	1.5	-2.1
1957-58	6.0	30.9	8.6	8.8	33.6	11.4	7.6
1958-59	7.1	-3.8	1.7	12.8	-2.5	4.2	0.7
1959-60	3.9	-11.9	6.1	6.0	21.7	4.0	0.5
1960-61	6.6	3.5	2.1	4.5	2.5	5.1	1.9

[a] Source: E. J. Hanson and I. C. Robison, Downtown Redevelopment Proposal (Calgary: City of Calgary--Canadian Pacific Railway, 1963), Table C-6, p. 212.

TABLE A-7

PERSONAL INCOME DATA AND PROJECTIONS
ALBERTA, SELECTED YEARS[a]

Year	Total Personal Income			Personal Income Per Capita 1957 Constant Dollars	
	In Millions of Current Dollars	In Millions of Constant 1957 Dollars	As a Per Cent of Total For Canada	In Constant 1957 Dollars	Five-Year Change, Per Cent
1926	$ 293	$ 517	7.30	$ 851	
1931	199	376	5.50	514	-39.6
1936	188	399	5.30	516	0.4
1941	323	590	5.52	741	43.6
1946	686	1,101	7.06	1,370	84.9
1951	1,228	1,346	7.76	1,433	4.6
1956	1,635	1,691	7.47	1,506	5.0
1961	2,107	1,986	7.51	1,491	-1.0
1971	3,304[b]	3,105[c]	7.90	1,759	18.0[d]
1981	5,167[b]	4,856[c]	8.30	2,076	18.0[d]

[a] Source: E. J. Hanson and I. C. Robison, Downtown Redevelopment Proposal (Calgary: City of Calgary--Canadian Pacific Railway, 1963), Table C-7, p. 213.

[b] In terms of 1961 dollars.

[c] In terms of 1957 dollars.

[d] Rate of increase per decade.

TABLE A-8

AVERAGE WEEKLY WAGE IN MANUFACTURING, CANADA, WESTERN PROVINCES AND SELECTED CITIES 1951 and 1961[a]

Region or City	In Current Dollars			In Constant 1961 Dollars[b]		
	1951	1961	Increase %	1951	1961	Increase %
Canada	$49.29	$74.27	51	$60.93	$74.27	22
Manitoba	47.08	68.43	45	58.20	68.43	17
Saskatchewan	48.47	76.67	58	59.91	76.67	27
Alberta	48.26	77.89	61	59.65	77.89	30
British Columbia	53.76	84.17	53	66.45	84.17	27
Montreal	46.23	69.04	50	57.14	69.04	21
Toronto	50.18	74.67	49	62.03	74.67	20
Winnipeg	46.11	68.36	48	57.00	68.36	20
Edmonton	47.47	78.35	65	58.68	78.35	34
Calgary	51.07	80.12	57	63.13	80.12	27
Vancouver	52.19	81.30	56	64.51	81.30	26

[a] Source: E. J. Hanson and I. C. Robison, Downtown Redevelopment Proposal (Calgary: City of Calgary--Canadian Pacific Railway, 1963), Table C-8, p. 214.

[b] Deflated by the D.B.S. implicit price index for gross national expenditure in terms of 1961 dollars.

TABLE A-9

PRIVATE AND PUBLIC INVESTMENT, CANADA AND WESTERN CANADA, 1956-1962[a]
(current dollars per capita)

Year	Manitoba	Saskatchewan	Alberta	British Columbia	TOTAL CANADA
1952	$450	$514	$783	$ 659	$503
1953	467	520	883	683	519
1954	475	580	763	560	507
1955	497	536	841	686	542
1956	582	707	994	952	649
1957	593	685	920	1,054	683
1958	629	699	935	777	643
1959	731	698	975	788	646
1960	726	701	946	748	629
1961	635	671	954	745	614
1962	656	732	899	749	638

[a] Source: E. J. Hanson and I. C. Robison, Downtown Redevelopment Proposal (Calgary: City of Calgary--Canadian Pacific Railway, 1963), Table A-17, p. 188.

TABLE A-10

NUMBER AND DISTRIBUTION OF TAXABLE RETURNS
CALGARY, EDMONTON, ALBERTA AND CANADA
1960[a]

	Calgary	Edmonton	Alberta	Canada
1. Number of Taxable Returns (000's)	83.9	97.3	310.2	4,389.5
% of Alberta	27	31	100	. . . .
% of Canada	1.9	2.2	7.0	100.0
2. Total Income Assessed (millions of $)	382.4	408.7	1,296.7	18,578.2
% of Alberta	30	32	100	. . . .
% of Canada	2.1	2.2	7.0	100.0
3. Taxable Income (millions of $)	219.6	221.8	685.4	9,726.9
% of Alberta	32	32	100	. . . .
% of Canada	2.2	2.3	7.0	100.0
4. Tax Payable (millions of $)	42.6	41.3	126.2	1,783.6
% of Alberta	34	33	100	. . . .
% of Canada	2.4	2.3	7.1	100.0
5. Distribution by Income Categories (Per Cent)				
Under $2,000	13.0	14.4	15.0	14.9
$2,000 to $3,999	40.6	44.5	43.3	42.6
$4,000 to $6,999	34.6	32.3	32.8	33.7
$7,000 to $9,999	7.2	5.6	5.8	5.4
$10,000 to $24,999	4.1	2.8	2.8	2.8
$25,000 and Over	0.5	0.4	0.3	0.4
Total	100.0	100.0	100.0	100.0
6. Average Income per Return	4,557	4,202	4,180	4,232
As % of Alberta	109	103	100	101
As % of Canada	108	99	99	100

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[a] Source: Derived from Government of Canada, Department of National Revenue, *Taxation Statistics, 1962* (Ottawa: Queen's Printer, 1962).

TABLE A-11

NUMBER AND DISTRIBUTION OF TAXABLE RETURNS CALGARY, EDMONTON, ALBERTA AND CANADA 1961[a]

	Calgary	Edmonton	Alberta	Canada
1. Number of Taxable Returns (000's)	87.3	107.6	319.5	4,507.8
% of Alberta	27.3	33.7	100.0	. . . .
% of Canada	1.9	2.4	7.1	100.0
2. Total Income Assessed (millions of $)	403.5	468.1	1,371.2	19,601.6
% of Alberta	29.4	34.1	100.0	. . . .
% of Canada	2.1	2.4	7.0	100.0
3. Taxable Income (millions of $)	229.8	257.9	734.9	10,423.0
% of Alberta	31.3	35.1	100.0	. . . .
% of Canada	2.2	2.5	7.1	100.0
4. Tax Payable (millions of $)	44.7	47.8	135.5	1,910.3
% of Alberta	33.0	35.3	100.0	. . . .
% of Canada	2.3	2.5	7.1	100.0
5. Distribution by Income Categories (Per Cent)				
Under $2,000	12.2	13.3	14.2	14.3
$2,000 to $3,999	40.0	41.6	41.5	41.1
$4,000 to $6,999	35.9	35.4	34.6	35.2
$7,000 to $9,999	7.1	6.3	6.3	5.9
$10,000 to $24,999	4.2	3.1	3.1	3.1
$25,000 and Over	0.5	0.4	0.3	0.4
Total	100.0	100.0	100.0	100.0

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[a] Source: Derived from Government of Canada, Department of National Revenue, Taxation Statistics, 1963 (Ottawa: Queen's Printer, 1963.

TABLE A-12

NUMBER AND DISTRIBUTION OF TAXABLE RETURNS CALGARY, EDMONTON, ALBERTA AND CANADA 1962[a]

	Calgary	Edmonton	Alberta	Canada
1. Number of Taxable Returns (000's)	95.7	114.0	333.0	4,681.2
% of Alberta	28.7	34.2	100.0	. . . .
% of Canada	2.0	2.4	7.1	100.0
2. Total Income Assessed (millions of $)	460.3	508.0	1,472.4	20,724.2
% of Alberta	31.3	34.5	100.0	. . . .
% of Canada	2.2	2.5	7.1	100.0
3. Taxable Income (millions of $)	264.2	277.5	789.9	11,107.9
% of Alberta	33.4	35.1	100.0	. . . .
% of Canada	2.4	2.5	7.1	100.0
4. Tax Payable (millions of $)	51.5	51.7	146.6	2,021.8
% of Alberta	35.1	35.3	100.0	. . . .
% of Canada	2.5	2.6	7.3	100.0
5. Distribution by Income Categories (Per Cent)				
Under $2,000	11.1	12.3	13.0	13.3
$2,000 to $3,999	37.0	40.2	40.0	39.4
$4,000 to $6,999	38.0	36.4	35.9	36.7
$7,000 to $9,999	8.3	7.0	7.1	6.7
$10,000 to $24,999	5.0	3.7	3.7	3.7
$25,000 and Over	0.5	0.4	0.3	0.4
Total	100.0	100.0	100.0	100.0

[a]Source: Derived from Government of Canada, Department of National Revenue, Taxation Statistics, 1964 (Ottawa: Queen's Printer, 1964.

TABLE A-13

POPULATION AND OTHER DATA, SELECTED CITIES AND METROPOLITAN AREAS, CANADA, 1961[a]

Metropolitan Area	Population, Thousands	Households, Thousands	Wage & Salary Income per Household Head	Median Value of Owner-Occupied Dwellings	Average Contract Rent of Tenant-Occupied Dwellings
Calgary	279	78	$4,695	$14,850	$ 77
Edmonton	338	89	4,495	14,517	72
Regina	112	30	4,462	12,190	76
Saskatoon	96	26	4,293	11,752	69
Toronto	1,824	483	4,729	17,301	101
Vancouver	790	229	4,637	13,932	75
Victoria	154	47	4,457	11,656	65
Winnipeg	476	129	4,307	12,999	71

[a] Source: E. J. Hanson and I. C. Robison, Downtown Redevelopment Proposal (Calgary: City of Calgary--Canadian Pacific Railway, 1963), Table C-11, p. 217.

TABLE A-14

TOTAL POPULATION, CANADA AND THE PROVINCES, CENSUS YEARS, 1921-1963[a]

Region	1921	1931	1941	1951	1956	1961	1963
Newfoundland	263	282	303	361	415	458	485
Prince Edward Island	89	88	95	98	99	105	107
Nova Scotia	524	513	578	643	695	737	762
New Brunswick	388	408	457	516	555	598	615
Quebec	2,360	2,875	3,332	4,056	4,628	5,259	5,503
Ontario	2,934	3,432	3,788	4,598	5,405	6,236	6,494
Manitoba	610	700	730	776	850	922	956
Saskatchewan	758	922	896	832	881	925	935
Alberta	588	732	796	940	1,123	1,332	1,415
British Columbia	525	694	818	1,165	1,398	1,629	1,708
Yukon and N.W.T.	12	14	17	25	32	38	41
Canada	9,051	10,658	11,810	14,009	16,081	18,238	19,021

[a] Source: E. J. Hanson and I. C. Robison, Downtown Redevelopment Proposal (Calgary: City of Calgary--Canadian Pacific Railway, 1963), Table A-1, p. 171.

TABLE A-15

POPULATION DATA AND PROJECTIONS, PROVINCE OF ALBERTA, DECENNIAL CENSUS YEARS 1911-1961, and 1971 and 1981[a]

Year	Population in thousands	Per Cent of Total for Canada	Per Cent of Total for Western Canada	Percentage Increase for Decade
1911	374	5.0	21.6	. .
1921	588	6.5	23.7	57.3
1931	732	6.9	24.0	24.3
1941	796	6.7	24.4	8.8
1951	940	6.7	25.1	18.0
1961	1,332	7.3	27.5	41.8
1971	1,765	7.7	28.9	32.5
1981	2,339	8.1	30.1	32.5

[a] Source: E. J. Hanson and I. C. Robison, Downtown Redevelopment Proposal (Calgary: City of Calgary--Canadian Pacific Railway, 1963), Table A-4, p. 174.

TABLE A-16

POPULATION OF CALGARY AND EDMONTON CENSUS YEARS, 1901-1961[a]

Year	Calgary			Edmonton		
	City Only	Metropolitan Area[b]	Percentage Increase[c]	City Only	Metropolitan Area[b]	Percentage Increase[c]
1901	4,392	. . . .	. . .	4,176	. . . .	. . .
1906	13,573	. . . .	209.0	14,088	. . . .	237.4
1911	43,704	. . . .	222.0	31,064	. . . .	120.5
1916	56,514	. . . .	29.3	53,846	. . . .	73.3
1921	63,305	. . . .	12.0	58,821	. . . .	9.2
1926	65,291	. . . .	3.1	65,163	. . . .	10.8
1931	83,761	. . . .	28.3	79,197	. . . .	21.3
1936	83,407	. . . .	-0.4	85,470	. . . .	8.0
1941	88,904	93,021	11.5	93,817	97,842	14.5
1946	100,044	105,000[d]	12.9	114,976	118,000[d]	20.6
1951	129,060	142,315	35.5	159,631	176,782	49.8
1956	181,780	201,022	41.2	226,002	254,800	44.1
1961	249,641	279,062	38.8	281,027	337,568	32.5

[a] Source: E. J. Hanson and I. C. Robison, Downtown Redevelopment Proposal (Calgary: City of Calgary--Canadian Pacific Railway, 1963), Table A-7, p. 177.

[b] Data not available before 1941 but the suburban populations were negligible before that date.

[c] Percentage increases for previous five year period.

[d] Estimated.

TABLE A-17

POPULATION, METROPOLITAN AREAS IN CANADA AND THE CITIES OF REGINA AND SASKATOON[a]

Metropolitan Area or City	1941	1951	1956	1961	Per Cent Increase 1941-51	Per Cent Increase 1951-61	Per Cent Increase 1956-61
	(population in thousands)						
Montreal	1,145	1,472	1,745	2,110	28.5	43.3	20.9
Toronto	910	1,210	1,502	1,824	33.0	50.7	21.4
Vancouver	377	562	665	790	48.9	40.6	18.8
Winnipeg	300	357	412	476	19.0	33.4	15.5
Ottawa	226	292	345	430	29.2	46.9	24.4
Hamilton	198	280	338	395	41.8	41.0	16.8
Quebec	225	276	312	358	22.9	29.4	14.8
Edmonton	98	177	255	338	80.7	91.0	32.5
Calgary	93	142	201	279	53.0	96.1	38.8
Windsor	124	164	186	193	32.0	18.2	4.0
Halifax	99	134	164	184	35.8	37.3	12.0
London	91	129	154	181	41.7	40.6	17.4
Kitchener	63	107	129	155	70.6	44.1	20.3
Victoria	76	113	134	154	49.8	36.2	15.2
Sudbury	71	74	98	111	4.2	49.9	13.0
Regina	58	71	90	112	22.4	57.2	24.9
Saskatoon	43	53	73	96	23.8	79.3	31.1

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[a] Source: E. J. Hanson and I. C. Robison, Downtown Redevelopment Proposal (Calgary: City of Calgary--Canadian Pacific Railway, 1963), Table A-5, p. 175.

TABLE A-18

FASTEST GROWING NORTH AMERICAN CITIES[a]

Rank	City[b]	Province	Growth Rate Per Cent	Population
1	Orlando	Florida	124.6	318,487
2	San Jose	California	121.1	642,315
3	Phoenix	Arizona	100.0	663,510
4	West Palm Beach	Florida	98.9	228,106
5	CALGARY	ALBERTA	96.1	279,062
6	EDMONTON	ALBERTA	91.0	337,568
7	Miami	Florida	88.9	935,047
8	Tampa-St. Petersburgh	Florida	88.8	772,453
9	Tucson	Arizona	88.1	265,660
10	San Diego	California	85.5	1,033,011
11	Sacramento	California	81.4	502,778
12	Albuquerque	New Mexico	80.0	262,199

[a] Source: T. F. Saarinen, "The Changing Office Functions in Calgary's Central Business District 1946-1963" (unpublished Master's Dissertation, Department of Geography, University of Chicago, 1963).

[b] Only cities with at least 100,000 population in 1950 were considered. For American cities the period used was 1950-1960, population 1960. For Canadian cities the period used was 1951-1961, population 1961.

TABLE A-19

POPULATION DATA, THE CITY OF EDMONTON 1946-1963[a]

Year	Population	Increase In Population Over Previous Year	Percentage Increase In Population
1946	114,976	3,231	2.89
1947	118,541	3,565	3.10
1948	126,609	8,068	6.81
1949	137,469	10,860	8.58
1950	148,861	11,392	8.29
1951	158,912	10,051	6.75
1952	169,196	10,284	6.47
1953	183,411	14,215	8.40
1954	197,836	14,425	7.86
1955	209,353	11,517	5.82
1956	224,003	14,650	7.00
1957	238,353	14,350	6.41
1958	252,131	13,778	5.78
1959	260,733	8,602	3.41
1960	269,314	8,581	3.29
1961	276,018	6,704	2.49
1962	294,967	18,949	6.87
1963	303,756	8,789	2.98

[a] Source: The City of Edmonton, Financial Statements and Reports, 1946-1963.

TABLE A-20

INCOME DATA, THE CITY OF EDMONTON
1946-1963[a]

Year	Number of Taxable Returns, Income Tax	Average Income Per Taxable Return	Total Income (In Millions of Dollars	Average Income in 1961 Constant Dollars	Local Taxes as a Percentage of Aggregate Income
1946	37,523	$1,938	$ 72.7	$3,527	7.26%
1947	37,850	2,204	83.4	3,659	6.57
1948	45,410	2,419	109.8	3,556	5.41
1949	42,210	2,832	119.6	3,996	5.66
1950	46,800	2,874	134.5	3,937	5.97
1951	55,080	3,102	170.8	3,846	5.60
1952	66,270	3,243	215.0	3,827	5.66
1953	74,290	3,369	250.3	3,942	5.31
1954	77,450	3,418	264.7	3,931	5.60
1955	84,000	3,539	297.3	4,034	5.38
1956	91,081	3,751	341.7	4,126	5.36
1957	95,524	3,876	370.3	4,147	5.84
1958	96,215	4.031	387.9	4,233	6.68
1959	95,499	4,223	403.3	4,307	7.22
1960	97,257	4,202	408.7	4,244	7.63
1961	107,559	4,352	468.1	4,352	7.23
1962	114,077	4,453	508.0	4,364	7.52
1963	. . . .	. . .	548.6[b]	. . .	7.63[b]

[a] Source: Government of Canada, Department of National Revenue, *Taxation Statistics* (Ottawa: Queen's Printer, 1948-1964).

[b] Estimate.

TABLE A-21

OCCUPATIONAL DISTRIBUTION OF THE LABOUR FORCE IN WESTERN CANADIAN METROPOLITAN AREAS AS A PERCENTAGE OF THE TOTAL IN EACH AREA 1961[a]

Occupation	Calgary	Edmonton	Regina	Saskatoon	Vancouver	Victoria	Winnipeg
Managerial	11.0	9.7	9.6	9.6	10.5	8.3	8.7
Professional & Technical	12.1	12.3	12.5	14.8	11.0	11.5	10.2
Clerical	18.3	17.3	22.2	16.0	16.3	14.5	19.7
Sales	8.9	8.5	8.7	9.1	8.8	8.0	7.8
Service & Recreation	14.8	14.6	14.8	15.1	13.2	24.2	14.9
Transport & Communications	6.5	7.1	6.1	7.3	6.5	5.4	6.7
Farmers & Farm Workers	1.2	1.3	1.4	1.9	1.6	2.6	1.1
Loggers, etc.	. .	0.1	. .	. .	0.5	0.4	. .
Fishermen, Hunters & Trappers	. .	. .	. .	. .	0.7	0.3	. .
Mining & Quarrying	0.3	0.6	0.1	0.2	0.3	0.1	0.1
Craftsmen & Production Processes	19.9	21.5	18.4	18.8	23.7	18.0	23.7
Labourers N.E.S.	4.3	4.5	3.7	4.1	4.1	3.6	4.7
Occupations Not Stated	2.6	2.5	2.5	3.2	2.9	3.0	2.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[a]Source: E. J. Hanson and I. C. Robison, Downtown Redevelopment Proposal (Calgary: City of Calgary--Canadian Pacific Railway, 1963), Table B-3, p. 192.

TABLE A-22

FORECAST POPULATION AND INCOME DATA THE CITY OF EDMONTON 1964-1973

Year	Population[a]	Total Taxable Income[b] (millions)	Total Local Taxes[c]	Local Taxes as a Percentage of Income
1964	314,400	$ 589.2	$45.8	7.78
1965	325,400	631.6	49.8	7.89
1966	336,800	676.6	54.1	8.00
1967	348,600	723.7	58.6	8.10
1968	360,800	773.2	63.4	8.20
1969	373,400	825.6	68.4	8.29
1970	386,500	880.4	73.7	8.37
1971	400,000	938.0	79.3	8.45
1972	414,000	999.0	85.2	8.53
1973	428,500	1,062.7	91.4	8.60

[a] Based on a growth rate of 3.5 per cent per year.

[b] Derived on the basis of the least-squares method of projecting the trend evidenced over the period 1954-1963.

[c] See Appendix B, Table B-5.

APPENDIX B

CURRENT EXPENDITURE DATA

APPENDIX C

REVENUE SOURCE DATA

TABLE B-1

THE CITY OF EDMONTON: CURRENT EXPENDITURE BY FUNCTION, 1946-1963[a]
(in thousands of current dollars)

Year	General Government and Miscellaneous	Protection to Persons and Property	Public Welfare	Recreation and Community Services	Sanitation and Garbage Removal	Conservation of Health	Public Works Construction	Education	Debt Charges	Surplus	Total
1946	$ 571	$ 787	$ 316	$ 299	$ 382	$ 52	$ 489	$ 1,947	$ 1,205	$ 3	$ 6,051
1947	481	928	336	447	497	62	413	2,130	1,090	.	6,391
1948	550	1,042	448	519	574	71	521	2,312	1,066	1	7.105
1949	635	1,174	343	580	652	72	632	2,789	1,284	1	8,217
1950	781	1,435	356	640	766	78	878	3,427	1,280	3	9,719
1951	867	1,898	550	805	943	90	707	4,130	1,673	3	11,751
1952	1,050	2,314	625	878	1,212	156	1,409	4,842	2,031	2	14,500
1953	1,184	2,698	908	992	1,362	209	1,392	5,369	2,683	18	16,813
1954	1,288	3,293	1,278	1,065	1,529	218	1,109	5,959	3,283	11	19,033
1955	1,427	3,777	1,150	1,286	1,564	244	1,396	5,430	3,968	4	20,246
1956	1,464	4,153	1,172	1,429	1,792	263	1,513	6,724	4,857	3	23,368
1957	1,740	4,827	1,477	1,639	1,971	307	1,833	7,968	5,827	3	27,592
1958	1,854	5,673	2,029	1,784	2,198	345	1,581	9,880	7,320	6	32,668
1959	1,972	6,400	1,875	2,030	2,290	390	1,676	11,211	8,275	7	36,119
1960	2,725	7,010	2,245	2,160	2,101	424	1,722	12,568	9,127	2	40,084
1961	2,854	7,781	3,384	2,411	2,141	467	1,660	13,313	9,426	4	43,507
1962	3,347	8,581	3,754	2,581	2,393	542	2,093	15,178	10,145	4	48,613
1963	3,901	8,987	4,546	2,854	2,373	592	1,556	16,587	11,009	.	52,404

[a] Source: The City of Edmonton, Financial Statements and Reports, 1946-1963.

TABLE B-2

CURRENT EXPENDITURE, FUNCTIONS AS A PERCENTAGE OF TOTAL THE CITY OF EDMONTON 1946-1963[a]

Year	General Government and Miscellaneous	Protection to Persons and Property	Public Welfare	Recreation and Community Services	Sanitation and Garbage Removal	Conservation of Health	Public Works Construction	Education	Debt Charges	Surplus	Total
1946	9.44	13.02	5.22	4.95	6.31	0.86	8.08	32.19	19.93	Negl.	100.00
1947	7.65	14.51	5.26	6.99	7.78	0.96	6.46	33.33	17.06	"	100.00
1948	7.74	14.67	6.31	7.31	8.08	1.01	7.34	32.54	15.00	"	100.00
1949	8.70	14.30	4.17	7.06	7.94	0.88	7.69	33.95	15.61	"	100.00
1950	8.81	14.77	3.66	6.59	7.89	0.80	9.04	35.27	13.17	"	100.00
1951	8.10	16.16	4.68	6.85	8.03	0.76	6.02	35.16	14.24	"	100.00
1952	7.24	15.93	4.28	6.04	8.33	1.07	9.71	33.39	14.01	"	100.00
1953	7.04	16.07	5.41	5.91	8.11	1.24	8.29	31.96	15.97	"	100.00
1954	6.77	17.30	6.71	5.50	8.03	1.15	5.83	31.31	17.25	"	100.00
1955	7.05	18.66	5.58	6.35	7.72	1.21	6.90	26.82	19.60	"	100.00
1956	6.26	17.77	5.02	6.12	7.67	1.13	6.47	28.77	20.78	"	100.00
1957	6.31	17.49	5.35	5.94	7.14	1.11	6.64	28.88	21.12	"	100.00
1958	5.67	17.37	6.21	5.46	6.73	1.06	4.84	30.25	22.41	"	100.00
1959	5.46	17.72	5.19	5.62	6.34	1.08	4.64	31.04	22.91	"	100.00
1960	6.80	17.49	5.60	5.39	5.24	1.06	4.30	31.35	22.77	"	100.00
1961	6.56	17.88	7.78	5.54	4.92	1.07	3.82	30.60	21.66	"	100.00
1962	6.88	17.65	7.72	5.31	4.92	1.11	4.31	31.22	20.87	"	100.00
1963	7.44	17.15	8.67	5.45	4.53	1.13	2.67	31.65	21.01	"	100.00

[a] Source: The City of Edmonton, Financial Statements and Reports, 1946-1963.

TABLE B-3

THE CITY OF EDMONTON: CURRENT EXPENDITURE PER CAPITA BY FUNCTION, 1946-1963[a]

(in current dollars)

Year	General Government and Miscellaneous	Protection to Persons and Property	Public Welfare	Recreation and Community Services	Sanitation and Garbage Removal	Conservation of Health	Public Works Construction	Education	Debt Charges	Surplus	Total
1946	$ 4.97	$ 6.84	$ 2.75	$2.60	$3.32	$0.45	$4.25	$16.93	$10.48	$0.03	$ 52.63
1947	4.13	7.83	2.83	3.77	4.19	0.52	3.48	17.97	9.20	. .	53.91
1948	4.34	8.23	3.54	4.10	4.53	0.56	4.12	18.26	8.42	0.01	56.12
1949	4.62	8.54	2.50	4.22	4.74	0.52	4.60	20.29	9.34	0.01	59.77
1950	5.25	9.64	2.39	4.30	5.15	0.52	5.90	23.02	8.60	0.02	65.29
1951	5.40	11.94	3.46	5.07	5.93	0.57	4.45	25.99	10.53	0.02	73.95
1952	6.21	13.68	3.69	5.19	7.16	0.92	8.33	28.62	12.00	0.01	85.70
1953	6.46	14.71	4.95	5.41	7.43	1.14	7.59	29.27	14.63	0.10	91.67
1954	6.51	16.65	6.46	5.38	7.73	1.10	5.61	30.12	16.59	0.06	96.21
1955	6.82	18.04	5.49	6.14	7.47	1.17	6.67	25.94	18.95	0.02	96.71
1956	6.54	18.54	5.23	6.38	8.00	1.17	6.75	30.02	21.68	0.01	104.32
1957	7.30	20.25	6.20	6.88	8.27	1.29	7.69	33.43	24.45	0.01	115.76
1958	7.35	22.50	8.05	7.08	8.72	1.37	6.27	39.19	29.03	0.02	129.57
1959	7.56	24.55	7.19	7.79	8.78	1.50	6.43	43.00	31.74	0.03	138.53
1960	10.12	26.03	8.34	8.02	7.80	1.57	6.39	46.67	33.89	0.01	148.84
1961	10.34	28.19	12.26	8.73	7.76	1.69	6.01	48.23	34.15	0.01	157.62
1962	11.35	29.09	12.73	8.75	8.11	1.84	7.10	51.46	34.39	0.01	164.81
1963	12.84	29.59	14.97	9.40	7.81	1.95	5.12	54.61	36.24	. .	172.52

[a] Source: The City of Edmonton, Financial Statements and Reports, 1946-1963.

TABLE B-4

THE CITY OF EDMONTON: CURRENT EXPENDITURE PER CAPITA BY FUNCTION, 1946-1963[a]
(in constant 1961 dollars)

Year	General Government and Miscellaneous	Protection to Persons and Property	Public Welfare	Recreation and Community Services	Sanitation and Garbage Removal	Conservation of Health	Public Works Construction	Education	Debt Charges	Surplus	Total
1946	$ 9.05	$12.45	$ 5.01	$4.73	$6.04	$0.82	$7.74	$30.81	$19.07	$0.05	$ 95.79
1947	6.86	13.00	4.70	6.26	6.96	0.86	5.78	29.83	15.27	. .	89.49
1948	6.40	12.10	5.20	6.03	6.66	0.82	6.06	26.84	12.38	0.01	82.50
1949	6.51	12.04	3.53	5.95	6.68	0.73	6.49	28.61	13.17	0.01	84.28
1950	7.19	13.21	3.27	5.89	7.06	0.71	8.08	31.54	11.78	0.03	89.45
1951	6.77	14.81	4.29	6.29	7.35	0.71	5.52	32.23	13.06	0.02	91.70
1952	7.33	16.14	4.35	6.12	8.45	1.09	9.83	33.77	14.16	0.01	101.13
1953	7.56	17.21	5.79	6.33	8.69	1.33	8.88	34.25	17.12	0.12	107.25
1954	7.49	19.15	7.43	6.19	8.89	1.27	6.45	34.64	19.08	0.07	110.64
1955	7.77	20.57	6.26	7.00	8.52	1.33	7.60	29.57	21.60	0.02	110.25
1956	7.19	20.39	5.75	7.02	8.80	1.29	7.43	33.02	23.85	0.01	114.75
1957	7.81	21.67	6.63	7.36	8.85	1.38	8.23	35.77	26.16	0.01	123.86
1958	7.72	23.63	8.45	7.43	9.16	1.44	6.58	41.15	30.48	0.02	136.05
1959	7.71	25.04	7.33	7.95	8.96	1.53	6.56	43.86	32.37	0.03	141.30
1960	10.22	26.29	8.42	8.10	7.88	1.59	6.45	47.14	34.23	0.01	150.33
1961	10.34	28.19	12.26	8.73	7.76	1.69	6.01	48.23	34.15	0.01	157.62
1962	11.12	28.51	12.48	8.58	7.95	1.80	6.96	50.43	33.70	0.01	161.51
1963	12.33	28.41	14.37	9.02	7.50	1.87	4.92	52.43	34.79	. .	165.52

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[a] Deflated by the D.B.S. implicit price index for gross national expenditure in terms of 1961 dollars. Calculated from Table B-3.

TABLE B-5

FORECAST CURRENT EXPENDITURES PER CAPITA
THE CITY OF EDMONTON
1964 TO 1973[a]

Year	General Government and Miscellaneous	Protection to Persons and Property	Public Welfare	Recreation and Community Services	Sanitation and Garbage Removal	Conservation of Health	Public Works Construction	Education	Debt Charges	Total
1964	$12.50	$32.01	$14.31	$ 9.84	$8.17	$2.03	$6.15	$58.01	$40.69	$183.71
1965	13.20	33.59	15.33	10.27	8.19	2.13	6.10	61.24	42.98	193.03
1966	13.90	35.17	16.35	10.70	8.21	2.23	6.05	64.47	45.27	202.35
1967	14.60	36.75	17.37	11.13	8.23	2.33	6.00	67.70	47.56	211.67
1968	15.30	38.33	18.39	11.56	8.25	2.43	5.95	70.93	49.85	220.99
1969	16.00	39.91	19.41	11.99	8.27	2.53	5.90	74.16	52.14	230.31
1970	16.70	41.49	20.43	12.42	8.29	2.63	5.85	77.39	54.43	239.63
1971	17.40	43.07	21.45	12.85	8.31	2.73	5.80	80.62	56.72	248.95
1972	18.10	44.65	22.47	13.28	8.33	2.83	5.75	83.85	59.01	258.27
1973	18.80	46.23	23.49	13.71	8.35	2.93	5.70	87.08	61.30	267.59

[a] Projected on the basis of the least-squares current dollar trend exhibited over the period 1954 to 1963.

TABLE D-5

PROJECTED CAPITAL EXPENDITURE BY FUNCTION THE CITY OF EDMONTON, 1964-1973[a]

(in thousands of dollars)

Year	Total Public Utilities	Electrical Distribution System	Power Plant	Edmonton Transit System	Telephone System	Water-works	Total Public Works	Roadways and Bridges	Total Municipal Capital Expenditures	Total School Capital Expenditures	Total Capital Expenditures
1964	$ 9,563	$ 2,600	$1,600	$ 422	$3,550	$1,391	$23,217	$5,636	$32,780	$6,797	$39,577
1965	11,963	4,700	2,000	502	3,350	1,411	24,361	5,959	36,324	7,041	43,365
1966	10,213	3,700	1,250	582	3,250	1,431	25,506	6,282	35,719	7,288	43,007
1967	19,463	8,600	5,550	662	3,200	1,451	26,650	6,604	46,113	7,543	53,656
1968	20,863	8,300	7,050	742	3,300	1,471	27,795	6,927	48,658	7,800	56,458
1969	26,163	15,100	5,200	822	3,550	1,491	28,940	7,249	55,103	8,065	63,168
1970	23,513	11,800	5,500	902	3,800	1,511	30,084	7,572	53,597	8,332	61,929
1971	18,413	6,900	5,000	982	4,000	1,531	31,229	7,895	49,642	8,608	58,250
1972	19,513	6,600	6,000	1,062	4,300	1,551	32,374	8,217	51,887	8,884	60,771
1973	19,613	7,500	5,000	1,142	4,400	1,571	33,518	8,540	53,131	9,169	62,300

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[a] Derived on the basis of information supplied by the city utility departments and the least-squares method of projecting the trend evidenced over the period 1954 to 1963.

TABLE D-11

CAPITAL EXPENDITURE BY FUNCTION, THE CITY OF EDMONTON, PUBLIC WORKS, 1946-1963[a]

Year	Roadways and Bridges	Sewers	Other Local Improvements[b]	Parks and Recreation	Civic	Protection[c]	Royal Alexandra Hospital	Miscellaneous	Total Public Works
1946	$ 356	$ 224	$ 328	$ 47	$ 46	. .	. .	$ 80	$ 1,078
1947	310	419	493	60	23	. .	$ 108	140	1,566
1948	742	922	503	74	110	$ 85	89	228	2,753
1949	1,240	484	1,765	113	127	162	. .	339	4,230
1950	1,166	2,345	2,258	156	98	252	. .	405	6,680
1951	1,562	1,672	2,151	94	413	391	65	510	6,858
1952	2,921	2,284	1,770	135	166	251	748	472	8,747
1953	3,551	3,642	2,461	297	132	333	1,187	1,624	13,222
1954	3,667	5,886	2,417	443	163	273	394	2,259	16,099
1955	3,347	3,393	2,940	316	1,368	4	230	2,436	14,106
1956	4,308	6,389	3,943	889	1,520	37	578	3,408	21,071
1957	5,672	6,688	3,394	956	504	115	676	2,055	20,060
1958	4,903	7,355	3,942	1,377	118	30	1,324	756	19,804
1959	3,886	5,319	4,315	1,036	128	46	1,371	74	16,175
1960	4,973	2,873	3,517	720	171	177	933	322	13,687
1961	5,356	2,943	4,168	1,000	489	1,050	4,922	955	20,884
1962	5,132	4,134	3,309	866	1,198	615	4,053	870	20,177
1963	4,783	3,644	2,777	968	689	981	517	606	14,965

[a] Source: The City of Edmonton, Financial Statements and Reports, 1946-1963.

[b] Includes: Boulevards, Sidewalks, Curbs, Watermains.

[c] Includes: Fire and Police Departments and Police Courts.

TABLE C-1

REVENUE BY SOURCE: THE CITY OF EDMONTON, 1946-1963[a]
(in thousands of current dollars)

Year	Property Taxation	Business Taxation	General	Government Grants	Contributions from Utilities	Deficit	Total
1946	$ 4,136	$ 373	$ 744	$ 30	$ 768	$. .	$ 6,051
1947	4,369	406	881	30	705	. .	6,391
1948	4,755	468	1,137	30	715	. .	7,105
1949	5,256	533	1,453	30	945	. .	8,217
1950	6,342	709	1,661	30	977	. .	9,719
1951	8,027	846	1,901	280	697	. .	11,751
1952	10,164	992	1,940	451	953	. .	14,500
1953	10,603	1,170	2,343	1,192	1,505	. .	16,813
1954	11,881	1,304	2,611	1,594	1,643	. .	19,033
1955	12,853	1,488	2,569	1,697	1,639	. .	20,246
1956	14,989	1,587	3,162	1,871	1,759	. .	23,368
1957	17,544	1,732	3,234	2,742	2,340	. .	27,592
1958	20,386	1,969	3,486	3,271	3,556	. .	32,668
1959	22,950	2,160	3,713	3,272	4,024	. .	36,119
1960	23,838	2,345	5,710	3,191	4,994	. .	40,084
1961	26,401	2,453	4,955	4,719	4,979	. .	43,507
1962	29,934	2,593	5,256	5,419	5,694	. .	48,896
1963	32,431	2,685	4,401	5,519	6,787	580	52,404

[a] Source: The City of Edmonton, Financial Statements and Reports, 1946-1963.

TABLE C-2

THE CITY OF EDMONTON: REVENUE SOURCES AS A PERCENTAGE OF THE TOTAL 1946-1963[a]

Year	Property Taxation	Business Taxation	General	Government Grants	Contributions from Utilities	Deficit	Total
1946	68.34	6.17	12.30	0.50	12.69	. .	100.00
1947	68.36	6.37	13.79	0.47	11.01	. .	100.00
1948	66.92	6.59	16.01	0.42	10.06	. .	100.00
1949	63.96	6.48	17.69	0.37	11.50	. .	100.00
1950	65.25	7.30	17.09	0.31	10.05	. .	100.00
1951	68.30	7.20	16.17	2.40	5.93	. .	100.00
1952	70.09	6.84	13.38	3.12	6.57	. .	100.00
1953	63.06	6.96	13.94	7.09	8.95	. .	100.00
1954	62.42	6.85	13.72	8.37	8.63	. .	100.00
1955	63.48	7.35	12.69	8.38	8.10	. .	100.00
1956	64.14	6.79	13.54	8.01	7.52	. .	100.00
1957	63.58	6.28	11.73	9.93	8.48	. .	100.00
1958	62.41	6.03	10.67	10.01	10.88	. .	100.00
1959	63.54	5.98	10.28	9.06	11.14	. .	100.00
1960	59.47	5.85	14.26	7.96	12.46	. .	100.00
1961	60.68	5.64	11.38	10.86	11.45	. .	100.00
1962	61.22	5.30	10.75	11.08	11.65	. .	100.00
1963	61.89	5.12	8.40	10.53	12.95	1.11	100.00

[a] Source: The City of Edmonton, Financial Statements and Reports, 1946-1963.

TABLE C-3

REVENUE PER CAPITA BY SOURCE, THE CITY OF EDMONTON, 1946-1963[a]
(in current dollars)

Year	Property Taxation	Business Taxation	General	Government Grants	Contributions from Utilities	Deficit	Total
1946	$ 35.97	$3.24	$ 6.47	$ 0.26	$ 6.68	$ . .	$ 52.63
1947	36.86	3.42	7.43	0.25	5.95	. .	53.91
1948	37.56	3.70	8.98	0.24	5.65	. .	56.12
1949	38.51	3.88	10.57	0.22	6.87	. .	59.77
1950	42.60	4.76	11.16	0.20	6.56	. .	65.29
1951	50.51	5.32	11.96	1.76	4.39	. .	73.95
1952	60.48	5.86	11.47	2.67	5.63	. .	85.70
1953	57.81	6.38	12.77	6.50	8.21	. .	91.67
1954	60.05	6.59	13.20	8.06	8.30	. .	96.21
1955	61.39	7.11	12.27	8.11	7.83	. .	96.71
1956	66.91	7.08	14.12	8.35	7.85	. .	104.32
1957	73.61	7.27	13.57	11.50	9.82	. .	115.76
1958	80.85	7.81	13.83	12.97	14.10	. .	129.57
1959	88.02	8.28	14.24	12.55	15.43	. .	133.53
1960	88.51	8.71	21.22	11.85	18.54	. .	148.84
1961	95.65	8.89	17.95	17.10	18.04	. .	157.62
1962	101.48	8.79	17.82	18.37	18.30	. .	165.77
1963	106.77	8.84	14.49	18.17	22.34	1.91	172.52

[a] Source: The City of Edmonton, Financial Statements and Reports, 1946-1963.

TABLE C-4

REVENUE PER CAPITA, THE CITY OF EDMONTON, 1946-1963[a] (in constant 1961 dollars)

Year	Property Taxation	Business Taxation	General	Government Grants	Contributions from Utilities	Deficit	Total
1946	$ 65.47	$5.90	$11.78	$ 0.47	$12.16	$ . .	$ 95.79
1947	61.19	5.68	12.33	0.42	9.88	. .	89.49
1948	55.21	5.44	13.20	0.35	8.31	. .	82.50
1949	54.30	5.47	14.90	0.31	9.69	. .	84.28
1950	58.36	6.52	15.29	0.27	8.99	. .	89.45
1951	62.63	6.60	14.83	2.18	5.44	. .	91.70
1952	71.37	6.91	13.53	3.15	6.64	. .	101.13
1953	67.64	7.46	14.94	7.61	9.61	. .	107.25
1954	69.06	7.58	15.18	9.27	9.55	. .	110.64
1955	69.98	8.11	13.99	9.25	8.93	. .	110.25
1956	73.60	7.79	15.53	9.19	8.64	. .	114.75
1957	78.76	7.78	14.52	12.31	10.51	. .	123.86
1958	84.89	8.20	14.52	13.62	14.81	. .	136.05
1959	89.78	8.45	14.52	12.80	15.74	. .	141.30
1960	89.40	8.80	21.43	11.97	18.73	. .	150.33
1961	95.65	8.89	17.95	17.10	18.04	. .	157.62
1962	99.45	8.61	17.46	18.00	18.91	. .	162.45
1963	102.50	8.49	13.91	17.44	21.45	1.83	165.62

[a] Deflated by the D.B.S. implicit index for gross national expenditure in terms of 1961 dollars. Calculated from Table C-3.

TABLE C-5

EXEMPT PROPERTY, THE CITY OF EDMONTON, 1963[a]
(in thousands of dollars)

Classification	Land	Buildings	Total
Dominion Government			
Dominion Government	$2,075	$8,973	
Grierson Estate	22	31	
	$2,097	$9,004	$ 11,101
Provincial Government			
Provincial Government	$3,857	$27,058	
University of Alberta	2,531	10,856	
Workmens Compensation Board Hospital	131	777	
	$6,519	$38,690	45,209
Provincial City Housing	$144	$228	372
Municipal			
Property Used by City	$7,822	$17,159	
Schools--Public & Separate	7,531	33,165	
Public Parks	3,398	1,596	
Public Hospital	723	9,509	
Public Libraries	90	133	
Property Acquired for Taxes	4,867	24	
	$24,432	$61,585	86,017
Property Used For Educational, Religious, Charitable & Welfare Purposes			
Private Schools	$ 198	$ 504	
Religious Purposes	2,295	8,175	
Charitable & Welfare Purposes	569	2,104	
	$3,062	$10,783	13,845
Special Agreements			
Macdonald Hotel	$445	$2,624	
Highlands Golf Course	160	20	
Airlines Hotel	. .	82	
Agricultural Buildings	. .	1	
Beverly Gas Pipeline Franchise	. .	40	
	$605	$2,767	3,372
Municipal Districts	$11	$94	104
Cemeteries Privately Owned	447	198	645
			$160,667

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[a] Source: The City of Edmonton, Assessors' Department, 1963.

TABLE C-6

ASSESSMENT AND TAXATION STATISTICS THE CITY OF EDMONTON, 1946-1963[a]

Year	Taxable Assessment (in '000)	Mill Rate	Current Levy (in '000)	Population
1946	$ 77,248	49.5	$ 3,824	114,976
1947	83,377	49.5	4,127	118,541
1948	90,835	49.5	4,496	126,609
1949	100,368	49.5	4,968	137,469
1950	120,413	49.5	5,960	148,861
1951	134,416	56.0	7,527	158,912
1952	179,267	52.5	9,412	169,196
1953	180,704	52.5	9,487	183,411
1954	198,928	53.0	10,543	197,835
1955	233,113	48.0	11,189	209,353
1956	255,152	51.0	13,013	233,549
1957	272,492	54.0	14,715	238,353
1958	293,184	58.0	17,005	252,131
1959	313,093	61.0	19,090	260,733
1960	331,112	63.0	20,860	269,314
1961	341,368	67.0	22,872	276,018
1962	543,975	47.5	25,839	294,967
1963	568,361	47.5	26,997	303,756

[a] Source: The City of Edmonton, Financial Statements and Reports, 1946-1963.

TABLE C-7

THE CITY OF EDMONTON, ANALYSIS OF 1963 ASSESSMENT ROLL[a] (thousands of dollars)

Classification	Land	Improvements	Total
Dwellings--60%	$11,042	$28,284	$39,326
Duplex-Semi-detached	885	3,572	4,457
Dwelling suites	5,318	4,906	10,223
Terrace buildings	1,091	7,453	8,544
Apartments	5,227	29,414	34,641
Stores--1 storey	7,976	5,463	13,439
Stores--2 storey	6,623	7,330	13,954
Stores--3 storey	2,607	1,706	4,313
Stores--Department	3,517	5,310	8,827
Supermarkets	2,144	7,698	9,843
Drive-in Restaurants	200	234	434
Offices--1 storey	610	952	1,562
Offices--multi-storey	6,412	15,803	22,214
Banks	1,835	3,424	5,258
Theatres	1,203	556	1,759
Hotels	2,691	5,374	8,066
Motels	667	1,677	2,344
Private Clubs, etc.	1,353	5,773	7,126
Warehouses	8,839	19,418	28,258
Garages	4,403	4,805	9,208
Filling Stations	3,694	2,582	6,277
Industrial Plants	5,010	17,564	22,574
Industrial Plants (Small)	2,673	4,371	7,045
Miscellaneous	3,936	1,460	5,396
Pipe & Transmission Lines	. . .	2,913	2,913
Railways	1,857	3,197	5,055
Total Commercial, etc	$91,814	$191,240	$283,054
Dwellings	87,047	162,912	249,850
Vacant Land	18,023	. . . .	18,023
Net Taxable Assessment	$196,883	$354,152	$550,937

TABLE C-7--Continued

Classification	Land	Improvements	Total
Municipally Owned--Taxable (Mun. & Prov. Valuation Act)	$ 1,773	$ 4,311	$ 6,084
Mun. Owned--Utilities Taxable	. . .	9,635	9,635
Est. Adj. S.W. 10 Sections	3,760	1,349	5,109
Reserve	500	500	1,000
Exempt	38,031	126,262	164,292
GROSS ASSESSMENT	$240,947	$496,208	$737,155

[a]Source: The City of Edmonton, Assessors' Department, 1963.

TABLE C-8

THE CITY OF EDMONTON, ANALYSIS OF 1963 ASSESSMENT ROLL[a]

Classification	Land	Buildings	Total	Percentage of Total	
				1963	1962
Single-Family Residences (50% Assessment)	$ 87,047	$162,912	$249,959	45.36	43.44
Multiple Residential	23,562	73,629	97,191	17.64	16.50
Commercial & Residential	17,207	14,499	31,706	5.76	5.93
Institutional (Private Schools, etc.)	1,353	5,773	7,126	1.29	1.43
Vacant Lands	18,023	. . .	18,023	3.27	3.52
Net Taxable Assessment	$196,883	$354,152	$551,035	100.0%	100.0%
Total Residential	$119,212	$243,790	$363,002	65.88%	64.87%
Total Non-Residential	77,671	110,362	188,032	34.12%	35.13%

[a] Source: The City of Edmonton, The Assessors' Department, 1963.

TABLE C-9

THE CITY OF EDMONTON, ANALYSIS OF 1964 ASSESSMENT ROLL[a]

Classification	Land	Improvements	Total	Percent of Total	
				1964	1963
Single-Family Residences	$91,505	$177,163	$268,668	46.60	45.36
Multiple Residential	22,069	75,766	97,835	16.97	17.64
Commercial & Residential	17,264	14,643	31,907	5.53	5.76
Commercial & Industrial	49,989	102,971	152,960	26.53	26.68
Institutional	1,222	5,230	6,452	1.12	1.29
Vacant Lands	18,771	. . . .	18,771	3.25	3.27
Net Taxable Assessment	$200,819	$375,774	$576,593	100.0%	100.0%
Total Residential	$122,206	$260,251	$382,457	66.33%	65.88%
Total Non-Residential	78,613	115,523	194,136	33.67	34.12

[a] Source: The City of Edmonton, Assessors' Department, 1964.

TABLE C-10

THE CITY OF EDMONTON, PROPERTY AND BUSINESS TAX COLLECTIONS, 1961-1963[a]

Classification	1963	1962	1961
Mill rate	47.5	47.5	67.0
Net Assessment	$568,361	$543,975	$341,378
Total Levy	34,877	33,229	29,455
Current Taxes Collected	32,807	31,233	27,946
Percentage of Levy	94.06	93.99	94.88
Total Collections	34,772	32,902	29,307
Percentage of Levy	99.70	99.01	99.50

[a] Source: The City of Edmonton, Financial Statements and Reports, 1961-1963.

TABLE C-11

BUSINESS TAX CATEGORIES AND RATES APPLICABLE[a]

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1. Businesses Subject to 6% Tax Rate:

- Art Moulder
- Barber
- Beauty Parlor
- Blacksmith
- Boat Builder
- Brickyard
- Carpet Cleaner
- Car Washing
- Chicken Rancher
- Chimney Sweeper
- Dressmaker
- Engraver
- Etcher
- Fumigator
- Furniture Polisher
- Fur Rancher
- Greenhouse
- Gunsmith
- Handicrafts
- Harness Maker
- Hat Cleaner
- Hotel
- Iron Worker
- Landscape Gardener
- Lapidist
- Launderer
- Livestock Rancher
- Locksmith
- Manicurist
- Market Gardener
- Monumental Works
- Motel
- Mushroom Grower
- Photo Finisher
- Picture Framing
- Riding Academy
- Shoe Shiner
- Signwriter
- Silver Plater
- Stamp Maker
- Stock Feeder
- Tailor
- Tannery
- Taxidermist
- Tool Sharpener
- Tourist Cabins
- Tourist Camp
- Trailer Camp
- Upholsterer
- Watchmaker
- Welder
- Window Cleaner

2. Businesses Subject to 10% Tax Rate:

- Advertising
- Agents
  - Advertising
  - Collection
  - Colonization
  - Detective
  - Employment
  - Insurance
  - Publicity
  - Publishing
- Billiard Parlor
- Blueprinting
- Bowling Alley
- Bricklayer
- Building Mover
- Bus Transportation Co.
- Business College
- Cabinet Maker
- Carpenter
- Caterer

TABLE C-11--Continued

2. Continued

- Purchasing
- Real Estate
- Rental
- Theatre Booking

Ambulance Service
Animal Hospital
Aeroplane Repairs
Auctioneer
Automobile Dealer
Automobile Repairs
Automobile Supplies
Auto Wrecking
Bakery
Ball Room
Banquet Hall
Baths
Battery Service
Driving School
Electrician
Exporter
Farm Implement Dealer
Floor Layer
Floor Surfacer
Foundry
Freight Overcharge Adjuster
Fuel Dealer
Funeral Parlor
Fur or Hide Dealer
Furrier
Garage
Gas Fitting
Golf School
Grain Elevator
Gymnasium
Hatchery
Hospital (Private)
Interior Designer
Kindergarten
Linotyper
Lithographer
Livery Stable
Cold Storage
Commercial Artist
Concert Hall
Concert Promoter
Concrete Reinforcing
Construction Co.
Contractor
Correspondence School
Creamery
Credit Bureau
Customs Broker
Dairy
Dance Hall
Decorator
Dental Laboratory
Dietician
Drafting
Physical Culture
Place of Amusement (other than moving picture or vaudeville theatres)
Plasterer
Plumber
Printer
Private School
Public Stenographer
Publisher
Radio Broadcasting
Recordings
Restaurant
Retail Merchant
Second Hand Dealer
Service Station
Skating Rink
Steamship Office
Stockyards
Storage
Sub-Contractors
Taxi Co.
Teachers

- Art
- Dancing

TABLE C-11--Continued

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2. Continued

Machine Shop
Manufacturers and Processors
Masseur
Mill and Feed Plant
Milliner
Mink Ranch
Multigrapher
Music Machine Rentals
Newspaper Publisher
Oil Well Driller
Oil Well Services
Optical Lab.
Painter
Palmistry
Parking Lot
Pawn Broker
Photographer

- Dramatic
- Elocution
- Music
- Voice

Telephone Answering Service
Theatre
Tire Repairs
Towel Supply
Trade Schools
Transfer
Travel Bureau
Truck Depot
Trucking
Utility Co.
Valuator
Vehicles for Hire
Well Driller
Wrecking Contractor

3. Businesses Subject to 12% Tax Rate:

Accountant
Analytical Chemist
Appraiser
Architect
Auditor
Barrister
Business Consultant
Chiropractor
Chiropodist
Christian Science Practitioner
Conveyancer
Dentist
Dermatologist
Electro-Therapeutist
Engineer

- Civil
- Consulting
- Electrical
- Mechanical

Geologist
Geophysical Laboratory
Insurance Adjuster
Lawyer
Medical Electrician
Notary Public
Oculist
Oil Field Exploration & Development
Optician
Optometrist
Osteopath
Physical Specialist
Physician
Physiotherapist
Radiologist
Solicitor
Statistician
Surgeon
Surveyor

TABLE C-11--Continued

3. Continued

- Mining
- Petroleum

Theatre - Motion Picture
Veterinarian
X-Ray Laboratory

4. Businesses Subject to 15% Tax Rate:

Brewers
Commercial Agent
Commission Agent
Express Co.
Finance Co.
Financial Co.
Grain Broker
Insurance Co.
Investment Co.
Land Co.
Livestock Dealer
Loan Co.
Manufacturers Agent

Mortgage Co.
Oil Leases
Oil Production
Pipe Line Co.
Produce Dealer
Railway Co.
Stock & Bond Brokers
Stock Exchange
Telegraph Co.
Trust Co.
Vaudeville Theatre
Wholesale Dealer in any commodity

5. Businesses Subject to 20% Tax Rate:

Air Transportation
Bank

Bus Depot

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[a] Source: The City of Edmonton, Draft General Plan for The City of Edmonton, Part VI, 1963, Table XXII, p. 200. In each case, the tax is calculated on the basis of the assessed value of the business concern. In no case may the city impose a business tax exceeding 25 per cent.

TABLE C-12

FORECAST REVENUE PER CAPITA
THE CITY OF EDMONTON
1964-1973[a]

Year	Property Taxation	Business Taxation	General	Government Grants	Contributions from Utilities	Total
1964	$112.86	$ 9.49	$18.34	$19.65	$23.37	$183.71
1965	118.39	9.77	18.90	20.91	25.06	193.03
1966	123.92	10.05	19.46	22.17	26.75	202.35
1967	129.45	10.33	20.02	23.43	28.44	211.67
1968	134.98	10.61	20.58	24.69	30.13	220.99
1969	140.51	10.89	21.14	25.95	31.82	230.31
1970	146.04	11.17	21.70	27.21	33.51	239.63
1971	151.57	11.45	22.26	28.47	35.20	248.95
1972	157.10	11.73	22.82	29.73	36.89	258.27
1973	162.63	12.01	23.38	30.99	38.58	267.59

[a] Projected on the basis of the least-squares current dollar trend exhibited over the period 1954 to 1963.

APPENDIX D

CAPITAL EXPENDITURE DATA

TABLE D-1

CAPITAL EXPENDITURE BY FUNCTION, THE CITY OF EDMONTON, PUBLIC UTILITIES, 1946-1963[a]

(in thousands of dollars)

Year	Electrical Distribution System	Power Plant	Edmonton Transit System	Telephone System	Waterworks	Total Public Utilities
1946	$ 221	$ 641	$ 232	$ 300	$ 109	$ 1,576
1947	333	854	716	285	324	2,512
1948	452	354	47	183	425	1,461
1949	130	233	189	134	184	871
1950	1,204	675	965	1,635	1,709	6,188
1951	1,004	608	900	1,886	1,493	5,891
1952	1,206	633	345	2,078	700	4,962
1953	1,526	1,163	31	2,507	660	5,887
1954	1,270	1,242	226	1,835	1,001	5,574
1955	1,615	2,080	407	2,198	1,151	7,451
1956	2,294	2,150	224	2,185	914	7,767
1957	2,988	3,301	70	2,689	1,376	10,425
1958	3,710	3,104	330	3,291	1,488	11,923
1959	2,929	2,425	166	3,324	1,426	10,269
1960	2,751	2,104	1,860	2,406	1,421	10,543
1961	2,173	1,912	132	3,301	1,110	8,629
1962	2,079	1,829	423	3,485	1,304	9,120
1963	1,937	1,531	1,190	3,131	1,111	8,900

[a] Source: The City of Edmonton, Financial Statements and Reports, 1946-1963.

TABLE D-2

MAJOR CATEGORIES AS A PERCENTAGE OF TOTAL CAPITAL EXPENDITURES, THE CITY OF EDMONTON 1950-1963[a]

Year	Public Utilities	Public Works	Total Municipal	Schools	Total Capital Expenditures
1950	41.6	44.8	86.4	13.6	100.0
1951	36.0	41.9	77.9	22.1	100.0
1952	30.4	53.5	83.9	16.1	100.0
1953	25.1	56.2	81.3	18.7	100.0
1954	20.8	60.2	81.0	19.0	100.0
1955	28.5	54.0	82.5	17.5	100.0
1956	22.6	61.4	84.0	16.0	100.0
1957	27.0	51.9	78.9	21.1	100.0
1958	31.1	51.7	82.8	17.2	100.0
1959	32.0	50.3	82.3	17.7	100.0
1960	36.3	47.0	83.3	16.7	100.0
1961	26.0	62.8	88.8	11.2	100.0
1962	26.1	57.7	83.8	16.2	100.0
1963	29.1	48.9	78.0	22.0	100.0

[a] Source: Derived from Tables D-1, D-11, and D-12.

TABLE D-3

CAPITAL EXPENDITURES BY MAJOR CATEGORY THE CITY OF EDMONTON, 1950-1963[a]

(in current dollars per capita)

Year	Total Public Utilities	Total Public Works	Total School	Total Capital
1950	$41.57	$44.87	$13.60	$100.04
1951	37.07	43.16	22.77	103.00
1952	29.33	51.70	15.57	96.59
1953	32.10	72.09	23.94	128.12
1954	28.17	81.38	25.68	135.23
1955	35.59	67.38	21.82	124.79
1956	34.67	94.07	24.47	153.21
1957	43.74	84.16	34.10	162.00
1958	47.29	78.55	26.11	151.94
1959	39.39	62.04	21.81	123.23
1960	39.15	50.82	18.02	107.99
1961	31.26	75.66	13.43	120.35
1962	30.92	68.40	19.16	118.48
1963	29.30	49.27	22.17	100.74

[a] Source: Derived from Tables, D-1, D-11 and D-12.

TABLE D-4

PER CAPITA CAPITAL EXPENDITURES BY MAJOR CATEGORY THE CITY OF EDMONTON, 1950-1963[a]

(in constant 1961 dollars)

Year	Total Public Utilities	Total Public Works	Total School	Total Capital
1950	$56.95	$ 61.47	$18.63	$137.05
1951	45.97	53.52	28.23	127.72
1952	34.61	61.01	18.37	113.98
1953	37.56	84.35	28.01	149.90
1954	32.40	93.59	29.53	155.51
1955	40.57	76.81	24.87	142.26
1956	38.14	103.48	26.92	168.53
1957	46.80	90.05	36.49	173.34
1958	49.65	82.48	27.42	159.54
1959	40.18	63.28	22.25	125.69
1960	39.54	51.33	18.20	109.07
1961	31.26	75.66	13.43	120.35
1962	30.30	67.03	18.78	116.11
1963	28.13	47.30	21.28	96.71

[a] Deflated by the D.B.S. implicit price index for gross national expenditure in terms of 1961 dollars. Calculated from Table D-3.

TABLE D-6

PROJECTED CAPITAL EXPENDITURES PER CAPITA
THE CITY OF EDMONTON
1964-1973[a]

Year	Total Public Utilities	Total Public Works	Total School	Total Capital
1964	$30.42	$74.82	$21.62	$126.86
1965	36.76	75.69	21.64	134.09
1966	30.33	76.48	21.64	128.45
1967	55.84	77.20	21.64	154.68
1968	57.83	77.85	21.62	157.30
1969	70.07	78.45	21.60	170.12
1970	60.84	78.97	21.56	161.37
1971	46.03	79.45	21.52	147.00
1972	47.13	79.87	21.46	148.46
1973	45.77	80.25	21.40	147.42

[a] Calculated from Table D-5.

TABLE D-7

PROJECTED CAPITAL EXPENDITURES: MAJOR CATEGORIES AS A PERCENTAGE OF TOTAL CAPITAL EXPENDITURES 1964-1973[a]

Year	Municipal			Schools	Total Capital Expenditures
	Public Utilities	Public Works	Total		
1964	24.2	58.7	82.9	17.1	100.0
1965	27.6	56.2	83.8	16.2	100.0
1966	23.7	59.3	83.0	17.0	100.0
1967	36.3	49.7	86.0	14.0	100.0
1968	37.0	49.2	86.2	13.8	100.0
1969	41.4	45.8	87.2	12.8	100.0
1970	38.0	48.6	86.6	13.4	100.0
1971	31.6	53.6	85.2	14.8	100.0
1972	32.1	53.3	85.4	14.6	100.0
1973	31.5	53.8	85.3	14.7	100.0
Per Cent of Ten Year Total	32.34	52.82	85.16	14.84	100.0

[a] Calculated from Table D-5.

TABLE D-8

PER CAPITA CAPITAL EXPENDITURE BY UTILITIES THE CITY OF EDMONTON, 1946-1963[a]

(in current dollars)

Year	Electrical Distribution System	Power Plant	Edmonton Transit System	Edmonton Telephone System	Waterworks System
1946	$ 1.92	$ 5.58	$2.02	$ 2.61	$ 0.95
1947	2.81	7.20	6.04	2.40	2.73
1948	3.57	2.80	0.37	1.45	3.36
1949	0.95	1.69	1.37	0.97	1.34
1950	8.09	4.53	6.48	10.98	11.48
1951	6.32	3.83	5.66	11.87	9.40
1952	7.13	3.74	2.04	12.28	4.14
1953	8.32	6.34	0.17	13.67	3.60
1954	6.42	6.28	1.14	9.28	5.06
1955	7.71	9.94	1.94	10.50	5.50
1956	10.24	9.60	1.00	9.75	4.08
1957	12.54	13.85	0.29	11.28	5.77
1958	14.71	12.31	1.31	13.05	5.90
1959	11.23	9.30	0.64	12.75	5.47
1960	10.21	7.81	6.91	8.93	5.28
1961	7.87	6.93	0.48	11.96	4.02
1962	7.05	6.20	1.43	11.81	4.42
1963	6.38	5.04	3.92	10.21	3.66

[a] Source: The City of Edmonton, Financial Statements and Reports, 1946-1963.

TABLE D-9

PER CAPITA CAPITAL EXPENDITURE BY UTILITIES IN CONSTANT 1961 DOLLARS THE CITY OF EDMONTON 1946-1963[a]

Year	Electrical Distribution System	Power Plant	Edmonton Transit System	Edmonton Telephone System	Waterworks System
1946	$ 3.49	$10.16	$ 3.68	$ 4.75	$ 1.73
1947	4.66	11.95	10.03	3.98	4.53
1948	5.25	4.12	0.54	2.13	4.94
1949	1.34	2.38	1.93	1.37	1.89
1950	11.08	6.21	8.88	15.04	15.73
1951	7.84	4.75	7.02	14.72	11.66
1952	8.41	4.41	2.41	14.49	4.89
1953	9.73	7.42	0.20	16.00	4.21
1954	7.38	7.22	1.31	10.67	5.82
1955	8.79	11.33	2.21	11.97	6.27
1956	11.26	10.56	1.10	10.73	4.49
1957	13.42	14.82	0.31	12.07	6.17
1958	15.45	12.93	1.38	13.70	6.20
1959	11.45	9.49	0.65	13.01	5.58
1960	10.31	7.89	6.98	9.02	5.33
1961	7.87	6.93	0.48	11.96	4.02
1962	6.91	6.08	1.40	11.57	4.33
1963	6.12	4.84	3.76	9.90	3.51

[a] Source: Deflated by the D.B.S. implicit price index for gross national expenditure in terms of 1961 dollars. Calculated from Table D-8.

TABLE D-10

PROJECTED PER CAPITA CAPITAL EXPENDITURES THE CITY OF EDMONTON, 1964-1973[a] (utilities only)

Year	Electrical Distribution System	Power Plant	Edmonton Transit System	Edmonton Telephone System	Waterworks System
1964	$ 8.27	$ 5.09	$1.34	$11.29	$4.42
1965	14.44	6.15	1.54	10.30	4.34
1966	10.99	3.71	1.73	9.65	4.25
1967	24.67	15.92	1.90	9.18	4.16
1968	23.00	19.54	2.06	9.15	4.08
1969	40.44	13.93	2.20	9.51	3.99
1970	30.53	14.23	2.33	9.83	3.91
1971	17.25	12.50	2.46	10.00	3.83
1972	15.94	14.49	2.57	10.39	3.75
1973	17.50	11.67	2.67	10.27	3.67

[a] Calculated from Table D-5.

TABLE D-12

MUNICIPAL AND SCHOOL CAPITAL EXPENDITURES THE CITY OF EDMONTON, 1946-1963[a]

Year	Total Municipal Capital Expenditures	Total School Capital Expenditures	Total Capital Expenditures	Property Share Local Improvements
1946	$ 2,654	$ 527	$ 3,181	$ 305
1947	4,078	471	4,549	457
1948	4,214	1,002	4,216	490
1949	5,101	2,664	7,765	1,529
1950	12,868	2,024	14,892	2,053
1951	12,749	3,619	16,368	2,106
1952	13,709	2,634	16,343	3,174
1953	19,109	4,390	23,499	4,560
1954	21,673	5,080	26,753	4,763
1955	21,557	4,569	26,126	3,893
1956	28,839	5,482	34,320	5,502
1957	30,485	8,129	38,614	5,723
1958	31,727	6,583	38,310	5,729
1959	26,445	5,686	32,131	6,538
1960	24,230	4,853	29,087	5,162
1961	29,512	3,707	33,219	6,493
1962	29,297	5,651	34,948	7,657
1963	23,866	6,733	30,599	6,354

[a] Source: The City of Edmonton, Financial Statements and Reports, 1946-1963.

TABLE D-13

PUBLIC WORKS CAPITAL EXPENDITURES, THE CITY OF EDMONTON, 1950-1963[a]

Year	Property Share Local Improvements as a Percentage of Local Improvements	Sewers as a Percentage of Public Works	Roadways and Bridges as a Percentage of Public Works	Other Local Improvements as a Percentage of Public Works	Local Improvements Property Share as a Percentage of Public Works
1950	35.6	35.1	17.5	33.8	30.7
1951	39.1	24.4	22.8	31.4	30.7
1952	45.5	26.1	33.4	20.2	36.3
1953	47.2	27.5	26.9	18.6	34.5
1954	39.8	36.6	22.8	15.0	29.6
1955	40.2	24.1	23.7	20.8	27.6
1956	37.6	30.3	20.4	18.7	26.1
1957	36.3	33.3	28.3	16.9	28.5
1958	35.4	37.1	24.8	19.9	28.9
1959	48.4	32.9	24.0	26.7	40.4
1960	45.4	21.0	36.3	25.7	37.7
1961	52.1	14.1	25.6	20.0	31.1
1962	60.9	20.5	25.4	16.4	37.9
1963	56.7	24.3	32.0	18.6	42.5

[a] Derived from Tables D-11 and D-12.

APPENDIX E

MUNICIPAL DEBT DATA

TABLE E-1

SELF-SUPPORTING DEBENTURE DEBT IN THE CITY OF EDMONTON, 1946-1963[a]

(in thousands of current dollars)

Year	Local Improvements & Property Share	Electrical Distribution System	Power Plant	Transit System	Telephone System	Waterworks Distribution System	Total Self-Supporting Gross Debt
1946	$ 843	$ 263	$ 860	$ 339	$ 476	$1,110	$ 3,890
1947	1,027	220	756	1,025	411	969	4,408
1948	1,361	178	1,710	1,464	1,096	834	6,643
1949	1,685	789	1,644	1,329	2,241	1,464	9,152
1950	3,007	1,081	1,183	1,899	2,997	2,985	13,152
1951	6,729	2,065	725	2,390	4,723	4,531	21,164
1952	9,497	2,258	630	2,269	5,612	4,339	24,604
1953	11,824	2,794	555	2,154	6,893	4,167	28,386
1954	14,483	4,141	487	2,039	7,944	4,254	33,348
1955	17,183	4,967	419	1,923	8,743	4,316	37,551
1956	18,727	5,476	351	1,806	9,955	4,357	40,671
1957	21,277	6,010	1,046	1,689	10,348	4,707	45,077
1958	21,870	8,990	3,578	1,571	13,112	4,966	54,088
1959	23,809	9,654	4,271	1,453	14,264	4,817	58,268
1960	24,114	12,825	5,745	1,334	15,804	4,920	64,741
1961	25,247	13,092	5,934	1,697	16,237	5,022	67,228
1962	31,621	13,329	6,265	2,064	17,077	5,097	75,454
1963	32,401	13,186	6,079	2,969	19,816	4,928	79,553

[a] Source: The City of Edmonton, Financial Statements and Reports, 1946-1963.

TABLE E-2

GROSS DEBENTURE DEBT, THE CITY OF EDMONTON, 1946-1963[a]
(in thousands of current dollars)

Year	General Debt[b]	Sewage Debt[b]	Self-Supporting Debt	Total Gross Debt	School Debt (Net)	Total Debt
1946	$12,644		$ 3,890	$ 16,535	$ 3,646	$ 20,181
1947	12,799		4,408	17,207	3,454	20,660
1948	12,249		6,643	18,892	3,965	22,857
1949	12,536		9,152	21,688	6,467	28,155
1950	16,309		13,152	29,461	8,797	38,258
1951	19,407		21,164	40,571	10,813	51,384
1952	21,335		24,604	45,939	12,577	58,516
1953	25,001		28,386	53,387	14,404	67,791
1954	28,541		33,348	61,890	17,107	78,997
1955	34,308		37,551	71,859	19,062	90,921
1956	17,717	23,792	40,671	82,180	20,569	102,749
1957	21,068	33,225	45,077	99,371	28,185	127,556
1958	21,505	38,694	54,088	114,287	30,269	144,556
1959	24,481	42,640	58,268	125,389	32,528	157,917
1960	26,698	42,618	64,741	134,058	33,015	167,073
1961	34,081	43,548	67,228	144,858	32,050	176,908
1962	36,841	44,950	75,454	157,244	33,740	190,984
1963	37,229	44,724	79,553	161,332	35,050	196,382

[a] Source: The City of Edmonton, Financial Statements and Reports, 1946-1963.

[b] For the period 1946-1955, General Debt and Sewage Debt were combined as one category, but have since been separated.

TABLE E-3

DEBENTURE DEBT PER CAPITA, THE CITY OF EDMONTON, 1946-1963[a]

(in current dollars)

Year	General Debt[b]	Sewage Debt[b]	Self-Supporting Debt	School Debt	Total Debt
1946	$113.60		$ 33.83	$ 31.71	$175.52
1947	107.97		37.19	29.13	174.29
1948	96.75		52.47	31.32	180.53
1949	91.19		66.58	47.04	204.81
1950	109.56		88.35	59.10	257.00
1951	122.12		133.18	68.04	323.35
1952	126.10		145.42	74.33	345.85
1953	136.31		154.77	78.53	369.61
1954	144.27		168.56	86.47	399.31
1955	163.88		179.37	91.05	434.30
1956	79.09	106.21	181.56	91.82	458.69
1957	88.39	139.39	189.12	118.25	535.16
1958	85.29	153.47	214.52	120.05	573.34
1959	92.89	163.54	223.48	124.76	605.67
1960	99.13	158.25	240.39	122.59	620.37
1961	123.47	157.77	243.56	116.12	640.93
1962	124.90	152.39	255.80	114.39	647.48
1963	122.56	147.24	261.90	115.39	646.51

[a] Source: The City of Edmonton, Financial Statements and Reports, 1946-1963.

[b] For the period 1946-1955, General Debt and Sewage Debt were combined as one category, but have since been separated.

TABLE E-4

DEBENTURE DEBT PER CAPITA, THE CITY OF EDMONTON, 1946-1963[a] (in 1961 constant dollars)

Year	General Debt[b]	Sewage Debt[b]	Self-Supporting Debt	School Debt	Total Debt
1946	$206.75		$ 61.57	$ 57.71	$319.45
1947	179.23		61.74	48.36	289.32
1948	142.22		77.13	46.04	265.38
1949	128.58		93.88	66.33	288.78
1950	150.10		121.04	80.97	352.09
1951	151.43		165.14	84.37	400.95
1952	148.80		171.60	87.71	408.10
1953	159.48		181.08	91.88	432.44
1954	165.91		193.84	99.44	459.21
1955	186.82		204.48	103.80	495.10
1956	87.00	116.83	199.72	101.00	504.56
1957	94.58	149.15	202.36	126.53	572.62
1958	89.55	161.14	225.25	126.05	602.01
1959	95.77	166.81	227.95	127.26	617.78
1960	100.12	159.83	242.79	123.82	626.57
1961	123.47	157.77	243.56	116.12	640.93
1962	122.40	149.34	250.68	112.10	634.53
1963	117.66	141.35	251.42	110.77	620.65

[a] Source: The City of Edmonton, Financial Statements and Reports, 1946-1963.

[b] For the period 1946-1955, General Debt and Sewage Debt were combined as one category, but have since been separated.

TABLE E-5

CAPITAL FINANCING AND DEBT STATISTICS
THE CITY OF EDMONTON
1946-1963[a]

Year	Municipal Debenture Sales ($'000)	Municipal Capital Expenditures ($'000)	Debenture as a Percentage of Capital Expenditures	Total Municipal Debt ($'000)	Municipal Debenture Interest ($'000)
1946	$ 254	$ 2,654	9.57	$ 16,535	$ 610
1947	1,045	4,078	25.63	17,207	554
1948	2,797	4,214	66.37	18,892	566
1949	9,820	5,101	192.51	21,688	631
1950	9,474	12,868	73.62	29,461	754
1951	13,133	12,749	103.01	40,571	1,139
1952	7,169	13,709	52.29	45,939	1,349
1953	9,519	19,109	49.81	53,387	1,533
1954	11,000	21,673	50.75	61,890	1,799
1955	13,000	21,557	60.31	71,859	2,061
1956	14,000	28,839	48.55	82,180	2,393
1957	21,500	30,485	70.53	99,371	2,744
1958	20,000	31,727	63.04	114,287	3,593
1959	17,000	26,445	64.28	125,389	4,369
1960	15,000	24,230	61.91	134,058	5,137
1961	18,427	29,512	62.44	144,858	5,748
1962	17,158	29,297	58.57	157,244	6,663
1963	12,952	23,866	54.27	161,332	7,345

[a] Source: The City of Edmonton, Financial Statements and Reports, 1946-1963.

TABLE E-6

STATEMENT OF INTEREST RATES ON DEBENTURE DEBT
THE CITY OF EDMONTON, DECEMBER 31, 1963[a]
(debenture amount in thousands)

Rate of Interest	Amount of Debenture Issue	
2.000	$ 1,762	
2.750	615	
3.000	628	
3.100	531	
3.250	11,667	
3.500	29,252	
3.750	3,275	
3.875	6,249	
		$ 53,979
4.000	$ 267	
4.250	26	
4.500	1,088	
4.750	25,089	
		26,470
5.000	$ 910	
5.125	5,008	
5.250	103	
5.625	10,099	
5.750	59,945	
		76,066
6.000		5,898
	Gross Debt	$162,412
	Less Sinking Fund	3,728
	Net Debt	$158,684

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[a] Source: The City of Edmonton, Financial Statements and Reports, 1963, Schedule "G", p. 25.

TABLE E-7

DISTRIBUTION OF OUTSTANDING DEBENTURES, THE CITY OF EDMONTON, DECEMBER 31, 1963[a]

(in thousands of dollars)

Debenture Holder	Amount
The Province of Alberta	$40,408
The Alberta Municipal Financing Corp.	87,725
The City of Edmonton Pension Fund	2,092
The Central Mortgage and Housing Corp.	425
The General Public	31,762
Total	$162,412

[a] Source: The City of Edmonton, Financial Statements and Reports, 1963, Schedule "H", p. 26.

TABLE E-8

PROJECTED FINANCING AND DEBT STATISTICS THE CITY OF EDMONTON, 1964-1973[a] (in thousands of dollars)

Year	New Debenture Debt	Capital Expenditures	Debt Retirement	Total Municipal Debt	Per Capita Municipal Debt
1964	$19,700	$32,780	$ 8,238	$172,794	$550
1965	21,800	36,324	8,812	185,782	571
1966	21,400	35,719	9,475	197,707	587
1967	27,700	46,113	10,083	215,324	618
1968	29,200	48,658	10,982	233,542	647
1969	33,000	55,103	11,911	254,631	682
1970	32,200	53,597	12,986	273,845	709
1971	29,800	49,642	13,966	289,679	724
1972	31,100	51,887	14,774	306,005	739
1973	31,900	53,131	15,606	322,299	752
Total	$277,800	$462,954	$116,833	. . . .	. .

[a] Calculated on the basis of the least-squares trend exhibited over the previous ten year period.

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